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RELIGIOUS PHILOSOPHY

LEWIS GUY ROHRBAUGH, B.D., PH.D.



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BY

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RELIGIOUS PHILOSOPHY. II

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TO HER WHOSE LIFE HAS BEEN SO GENUINELY REAL MY MOTHER



FOREWORD

It may be difficult for the reader to determine whether the ultimate purpose of this volume finds its realization primarily in the field of philosophy, science, or religion. The truth of the matter is clearly stated in saying that the setting forth of the relationship which exists between these fields has been the compelling motive in the organization of the following program. Some problems have been selected common to both religion and philosophy and in working at their solution, scientific endorsement has been continually sought, thus trying to unite the avenues of truth as represented by heart, head, and sense. This work, however, is written mostly in the language of philosophy.

Our position is that truth is truth wherever met, no matter whether the approach to things real is through philosophy, science or religion. Writers in the field of science and religion have built independent systems and are guiltily responsible for a prevailing belief on the part of many that an unbridgeable gulf flows between the two. Biblical truth has suffered at the hands of misinterpretations while science has been slow getting its start, religious dogmatism being in no small way responsible for its retardation. We maintain that the same truth permeates both and inter-relates them, and in working at this problem have built our entire

that the following work will make its contribution toward bringing together these two important fields of thought—science and religion, even finding in philosophy and science definite confirmation of some of the important truths of the Christian faith. Giving religion a philosophical-scientific relationship to truth is by no means amiss in this new day of readjustment.

Not only the average reader who is really interested in a system of religious philosophy but also the regular student who is working at such fundamental problems as creation, God, vitalism and mechanism, immortality, life, death, evolution, and evil will probably find this volume more or less useful. The teacher of philosophy may find it of benefit as a reference work when dealing with the general problem of reality, especially when looking for a spiritualistic and dynamic emphasis.

In Part III we give a chapter to the problem of evil, conscious of the fact that the theory presented is contrary to a prevalent attitude in modern thought. It is offered as a compromise between two extreme positions—the one which would interpret the Genesis representation literally, the other which would place the responsibility for evil squarely upon God, who at the same time is believed to be all wise and mighty. The theory presented here stands ready to receive its share of criticism, but in the face of the serious conflict in present attitudes will hardly be compelled to bear a heavier burden of criticism than the average hypothesis which attempts to explain the problem of evil. In the spirit of science it is offered as an over-belief, but those students who feel that the Genesis theory is funda-

mentally right, its primary lesson being to teach that some irregularity is responsible for the confusion and misery of the world, may find in this presentation a certain degree of genuine satisfaction.

L. G. R.

Carlisle, Pa.



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PART I: DYNAMICS IN SCIENCE AND PHILOSOPHY



RELIGIOUS PHILOSOPHY

CHAPTER I

ENERGY AS REALITY

Upon all sides to-day we hear emphasis put upon the energy concept in philosophy. Dynamism has superseded materialism. Activism, voluntarism, pragmatism, and philosophies of this active type are coming more and more to take the place of the older systems of mechanism. Students in philosophy are compelled to recognize the significant place which such systems as those of Leibnitz, Bergson, Ostwald, etc., are holding in the field of modern thought. If Leibnitz' philosophy were to be re-stated to-day from the standpoint of modern scientific thought and terminology, it would probably be termed a system of Energism. With Bergson life is one continuous process of Becoming, and fundamental in this process is the guiding agent which he calls the vital impetus. So active and vital is this inner principle that it would seem impossible to think of Bergson's philosophy out of relation to the energy concept. With Ostwald, energy is the primary concept; everything that exists is but a part of a great system of energies. Such energetic conceptions as these sound the keynote to modern philosophical thought and receive genuine support from recent scientific discoveries.

In physical science we are told that matter, under the scrutiny of experimental physics, has resolved itself into energy. When asked what this ultimate and final energy is, we are sometimes referred to another concept, that of electricity. And inasmuch as we shall endeavor to interpret reality in terms of energy and make a critical inquiry into the energy concept in its qualitative aspects, it becomes imperative therefore at this stage of philosophical inquiry to examine into this concept of energy and determine, if we can, its philosophical import.

Philosophers have been concerned with the problem of reality since the earliest history of thought, and to the question, What is reality? many and varied answers have been given. We find that in the approach to this problem the scientific understanding of the ancients presents an interesting contrast with that of to-day. Instead of the four elements of Empedocles—earth, air, fire, and water—more than ninety elements have been found, entering into the make-up of the earth and all existing objects. "The spectroscope tells us that in the most distant stars the same elements exist as here, and that the periods of vibrations which cause them to emit light are identical with those of their terrestrial representatives." All material things can be analyzed and resolved into these ninety elements.

In the philosophy of the early days we meet two opposing schools of thought—one teaching that everything is and nothing becomes; the other declaring that nothing is and everything is in a process of becoming.

Heracleitus, representing the latter school, believed all things to be in a state of flux; there is no such thing as rest. In this he anticipated a fundamental principle in modern science, for science to-day holds that matter is made up of a countless number of moving particles. In the decomposition and changes peculiar to inorganic matter, and in the myriads of living cells composing organic matter we find that there are no two successive moments when any single particle of substance fails to experience some genuine change.

BRIEF STATEMENT CONCERNING THE ATOMIC THEORY

As we proceed with our task it becomes evident that a study of the atomic theory, which has to do with the organization of these little moving particles, is fundamental to any treatment which might be made of matter and any search for facts which have to do with ultimate reality. It is a long road, however, from Democritus, the first real exponent of Atomism, to the present time, and many and varied have been the interpretations made of this system along the way.

With Democritus the atom is simply a hard little body moving mechanically through space. The atoms coming together are responsible for all changes. By this method in his system of materialism he would endeavor to explain all phenomena, from the most simple external occurrences to the deepest experiences of the mental life.

A new light was thrown on the atomic theory when Newton's law of gravitation took its place in the world of science. Instead of the atoms clashing at random and being held together in a chance way by means of their jagged surfaces, the element of attraction was introduced. "It was natural that, having explained the cosmical, and subsequently many terrestrial phenomena, successfully by the formula of attraction, Newton himself, and still more Laplace and his school, should have attempted the explanation of molecular phenomena by similar methods. The astronomical view spread into molecular physics. Newton himself made use of the notion of molecular attraction—i.e., of attraction existing only at very small distances—to explain the refraction and inflection of light passing from empty space, or from the atmosphere, into or in the neighborhood of solid bodies." ¹

Boscovich was among the first to lose faith in a dependence on the impact of the atoms; nor could he be satisfied with allowing them extension. He felt that the fundamental essence of matter was to be found in atom points, situated in space, from which, as a basis, repulsive forces operated.

Dalton, who gave to each atom a definite weight, was responsible for the establishment of the atomic theory of the modern day. He taught that the small particles in all bodies are held together by an attractive force, and that there is also present and operating in matter a repulsive force. This introducing into the theory the element of forces was carried even further by such men as Fechner, Moigno, and Faraday, who would make the atoms simple centers of force, which

¹ Merz, History of European Thought in the Nineteenth Century, Vol. 1, pp. 354-356.

closely approaches a system of dynamism and paves the way to the energy concept.

In the analysis of substance according to the atomic theory, the smallest unit we meet is the molecule which can be further divided into atoms. In HNO3 we have a molecule of nitric acid, containing one atom of hydrogen, one of nitrogen, and three of oxygen. The molecules differ according to the number of atoms constituting them. The atoms of the same element have been considered invariable in size, having a definite and fixed weight. It is believed to-day, however, that the so-called atomic weights are merely averages. Radium, thorium, and uranium have the heaviest atoms and hydrogen the lightest. "We are as certain of the existence of these atoms and of their uniformity and invariability as if we could count and measure them. Indeed they are actually counted in certain cases of radioactivity." 2

THE ELECTRONIC THEORY

The atomic theory has been a very profitable instrument in the hands of science for a long time, but acquired knowledge now enables us to make an analysis of Nature which transcends the limitations of the atom. Just as the molecule of substance was divided and the atom made the smallest measure of matter, so the atom to-day is analyzed and found to be composed of still smaller particles.

One of the most remarkable pieces of work accomplished by science in recent years has been this success-

² Soddy, Matter and Energy, p. 55.

ful analysis of the atom. As the smallest unit of matter entering into the make-up of the elements, the atom has lost its prestige, and science to-day is thinking in terms of the electron instead. It is the development of the electronic theory which has not only popularized the energy concept but given it a well established place in modern scientific discovery and thought. It has confirmed the long-held belief in the presence of a dynamic force in Nature, and seems to show that ultimate reality itself is identical with what science has been calling electricity, but now looks upon as some form of energy.

According to Rutherford each atom is believed to be like a little solar system, being composed wholly of charges of negative electricity, electrons, revolving "in regular orbits" about a core or nucleus which is a charge of positive electricity. More recent thought, however, is inclined to believe that the electrons are vibrating in certain regions, rather than revolving about a nucleus, within the atom. Motion results as the electrons repel each other and in their activities they are held in balance by the attraction of the positive unit. It is thought that the negative charges are equal to the free positive charge of the nucleus and in this fact the atom realizes a possible equilibrium.

Some writers consider the electron to be a unit of electricity whether negative or positive. For our present purpose we shall call only the unit of negative charge an electron. The electrons of the atom are all the same, no matter from whatever element's atoms they come. They are constituents of every atom, are

³ Gibson, Scientific Ideas of To-day, p. 53.

real electricity, which flowing, constitute electric current.

Concerning the nucleus of the atom, science does not have full knowledge. We are sure, however, that it is electricity and predominantly positive. In this nucleus have been found electrons which under certain conditions are set free. This core or positive charge is less than one ten thousandth the diameter of the atom and numerically equal to one half the atomic weight,4 while "the whole atom is perhaps one hundred thousand times as large in diameter as the electrons." 5

The velocity of the electrons in their flight is almost inconceivable; thus they occupy but small space and constitute a solid. The immense possible velocity is suggested in the statement that "the velocity of the electron when impelled by strong electric force may reach sixty thousand miles per second when shot through a vacuum, the better the vacuum the higher the speed." ⁶

Under certain conditions atoms gain and lose electrons. Sometimes the negative charges predominate and sometimes the positive, according to whether the atom has taken on or given off electrons. Some elements will give up electrons quicker than others. The stronger a metal, the stronger the tendency to give up electrons when exposed to the impact of light. The latest theory of color is based on the principle of the looseness of the electrons in the atom. The weight itself of an element is determined by the electrons. Thompson says "the atomic weight of an element is

⁴ Stewart, The Homiletic Review, Oct., 1914. ⁵ Mills, The Realities of Modern Science, p. 90. ⁶ Gibson, Scientific Ideas of To-day.

proportionate to the number of electrons contained in the atoms." So in hydrogen, the lightest atom, we find but one electron and in uranium, the heaviest known atom, there are ninety-two. To-day then, science does not have to stop with the atom, but can take that more ultimate particle, the electron, as a working basis.

This brings us safely to the place of assumption that electricity is a common, pervading factor peculiar to the finest particles in all matter, and the electron as a unit of energy presents itself as a general medium of permeation running through all forms of material existence, animate and inanimate. This is given partial confirmation in the fact that electrical excitation can very often get definite responses from animals, plants, and inorganic substances. "The everyday laboratory faith of the physicist is now not in visible material as formerly understood, but in the invisible thing we call electricity. He has repudiated the atom as a unit, observing in it a wonderful and complex system of unending interest and great experimental possibilities, and has accepted the atom of electricity as the basis for his scientific belief. . . . The reality of matter, as formerly conceived, is now abandoned, and the invisible becomes the everyday reality of the scientific laboratory." 7

As we now come face to face with Nature in its ultimate analysis, reality itself, we come face to face with what, in commercial as well as scientific language, has been called electricity. In this we foresee meanings

⁷ Stewart, The Homiletic Review, Oct., 1914.

and possibilities more far-reaching than was ever dreamed. And in dealing with this dynamic something, science is not willing any longer to talk in terms of what has been known as the electricity concept but endeavors to broaden and deepen its hold on truth and proceeds in this field of inquiry in the name of the energy concept.

THE ENERGY CONCEPT AND COSMIC EVOLUTION

A study of cosmic evolution confirms the belief that there is and has been an all-prevailing something more fundamental than electricity, which something is energy, and which is manifesting itself to-day as electricity. When we find the dynamic conception of reality prevailing in much of the best philosophy of all ages, in modern psychology, and even in to-day's philosophy of life, it is not strange that in its progress toward ultimate truth modern science should be confirming this interpretation by its strong and positive representation of the concept of energy. It seems necessary then for us to "reverse our thought in the search for causes and take steps toward an energy conception of the origin of life and energy conception of the nature of heredity." 8

As intimated in the foregoing, the history of the earth's evolution is fundamentally the history of the changes in forms of energy. Four of these have primarily manifested themselves in this process of cosmic development-heat, light, chemical affinity, and electricity. According to MacFarlane,9 in the very primi-

⁸ Osborn, The Origin and Evolution of Life, p. 10.
9 MacFarlane, The Causes and Course of Organic Evolution.

tive state of the earth when everything was in a nebulous ¹⁰ state, energy manifested itself as heat. The intensity of the heat must have been extreme "in this gaseous state of the earth and according to Arldt a temperature of at least 15000c may have existed." ¹¹ Associated with the intense heat was a corresponding rapidity in the motion of the constituents of this fiery mass; and in the development from this gaseous state the degree of motion of these particles increased, proportionate to the condensation of heat which took place. Here then in the condensation of heat energy we meet with motion and its cause as first experienced in the cosmic order.

In the gradual change from the gaseous to the liquid state, instead of energy primarily manifesting itself as heat, it began to assert itself as light. Then, as the energy continued its condensation, with an increased activity and higher degree of organization of the atoms we find that energy expressed itself as "chemical affinity." Thus as the earth progressed in its cooling process, associated with which was a definite progress in the organization of the centers of energy, bodies began to come into definite forms of existence, reaching the highest and best condition in the solid state when energy expressed itself primarily as electricity. Thus when we study the transformation of energy

¹⁰ In suggesting this program we are fully aware that science in America, especially geology and biology, is giving precedence to the Planetesimal Hypothesis as over against the Nebular Hypothesis. But even so, this does not at all controvert our theory as to the part energy has played in the process of cosmic evolution.

¹¹ MacFarlane, The Causes and Course of Organic Evolution, p. 21, passim.

through the gaseous, liquid, and solid states, from original heat and light to electricity, we are not surprised to see electricity quickly and easily taking the forms of heat and light, harmonizing somewhat with Fanvell's view that electricity is a "highly condensed or latent heat." As Osborn would say, it is but the old forms of energy taking new directions.

According to our hypothesis then, in the ultimate analysis of all things we meet energy. In it wonderful possibilities and potentialities are to be found. It is the Alpha and Omega of all forms of existence, the different bodies being but different expressions of the same thing. Haeckel confirms this in saying that "mechanical and chemical energy, sound and heat, light and electricity are mutually convertible; they seem to be but different modes of one and the same fundamental force or energy.12 That energy is a common principle underlying all existence, organic and inorganic, is also supported by Osborn: "No form of energy has thus far been discovered in living substances which is peculiar to them and not derived from the inorganic world." 13 "Thus the evolution of life may be written in terms of invisible energy as it has long since been written in terms of visible forms." 14

HE ENERGY CONCEPT AND THE UNITY OF NATURE

In the unity of Nature we have a situation which seemingly is best explained by the presence of some

¹² Haeckel, Riddle of the Universe, p. 254. (Translated by McCabe.)

¹⁸ Osborn, The Origin and Evolution of Life, p. 12. 14 Ibid., p. 17.

universal, dynamic essence such as energy; and the more progress we make in our understanding of Nature the more we are impressed with the harmonious interactions and relationships existing between Nature's constituents. Marvin feels that if we could see Nature through perfect eyes all seeming discords would disappear. He says "the doctrine of evolution has made the forms of animal and plant life, the institutions, customs, and languages and arts of different peoples all seem but different chapters in one connected story of earthly life. In short, increased knowledge reveals increased interconnection and complete knowledge would reveal complete interconnection." 15 Since organic and inorganic bodies are composed of the same ingredients, all coming from the same elements, it is very natural to look upon the world as one great unitary whole.

Tagore, the poet-philosopher of India, protests against the idea that certain parts of Nature are set off from the rest. He advocates a real unity of Nature in saying that "in the west the prevalent feeling is that Nature belongs exclusively to inanimate things and to beasts, that there is a sudden, unaccountable break where human nature begins. According to it, everything that is law in the scale of beings is merely Nature, and whatever has the stamp of perfection on it, intellectual or moral, is human nature. It is like dividing the bud and the blossom into two separate categories and putting their grace to the credit of two different and antithetical principles." 16

¹⁵ Marvin, A First Book in Metaphysics, p. 92. ¹⁶ Tagore, Sadhana—The Realization of Life, pp. 6-7.

Not only no man liveth unto himself, but no thing liveth unto itself. There is a common chord running through all life. The interests of all forms of existing life are mutual. The tender, sympathetic strain common to all life is necessarily based upon a reciprocity in relationships.

Even between the lower animals and man a tender understanding is often experienced, and in many cases the responses obtained from them are almost incredible. The pipe organ not only thrills us as human beings but gets a sympathetic response from inanimate objects as well. We love to commune with Nature but the reality of this experience would vanish if we should try to make it a one-sided affair on our part. Being human we best understand man's feelings in relation to other existing things but that does not say that he contributes more than his proportionate share of appreciation to the unity and harmony of Nature. In this fact of mutual relationships there must be some element of reality upon which these interactions can ride back and forth. We find this principle of reality in energy into which man and beast and clod can be resolved.

Behind this attitude modern thought seems to be arraying itself. De Tunzelmann says "the observed correlation of mental and material phenomena definitely demonstrates the power of the human mind and the minds of other living beings, to influence and be influenced by, changes in the distribution of energy in their material environment." ¹⁷

17 de Tunzelmann, The Electrical Theory and Problem of the Universe, p. 471.

Some would go so far as to say "physical and psychical processes depend so on one another that it is possible to find in energy not only a possible unifying of Nature but an occasion for an efficient and moving cause." Energy seems to be established as the fundamental means of interaction and relationship between mind and matter, mind and mind, and matter and matter. Perry would get to the heart of the whole question and says: "Instead of conceiving a matter that manifests itself in forms and motions, why not stop at force and invest it with finality and universality?" 18

Perhaps de Tunzelmann comes out strongest in championing the cause of energy as the ultimate basic element in all matter. He says we cannot conceive of a substance from which the uniform distribution of energy has been abstracted. Its very life would be taken away if the energy element were eliminated. He seems to sum up his attitude in saying, "A'll the phenomena of the material universe may therefore be considered as arising solely from changes in energy distribution. That is to say, energy is the sole ultimate phenomenal basis of matter." 19

It is very evident then that in recent years a great change has taken place in the field of science due to the development of the electronic theory of matter. In fact, we have come to that place where it can be said that "the old concept of stuff has been completely displaced by the new concept of radiant energy." 20 Thus it seems that the old scientist-philosophers, some of

¹⁸ Perry, Present Philosophical Tendencies, p. 70.
19 de Tunzelmann, The Electrical Theory and Problem of the Universe, p. 470.

20 Carr, Preface to Bergson's Mind-Energy, p. vi.

whose systems we shall review in the next chapter, in teaching the presence in matter of a dynamic element, were feeling after the real truth in the situation. For modern science not only confirms this attitude but, as has been suggested, goes still further, and by satisfactory experiments has come to the conclusion that "there is no difference between matter and energy" ²¹ and that the world in its ultimate essence, reality itself, is energy.

²¹ Wendt, Lectures.

CHAPTER II

THE DYNAMIC TREND IN THE HISTORY OF THOUGHT

As suggested in our first chapter the dynamic conception of the world is not at all new, and the attitude of modern science toward the energy concept has a strong background of support in the energetic conception of reality so evident in the history of thought. We shall now undertake as our immediate task to pass in review those thinkers, ancient and modern, who have dwelt upon the dynamic aspect of reality.

ΦΥΣΙΣ

The men of the early Ionian school were the first to try to get into the heart of Nature and find out what is the abiding element in all changing things—that common substance from which all things come and into which they pass.¹ To understand the teaching of these early Greek thinkers it is necessary to understand the meaning of $\varphi v\sigma is$ as used by them, for this seems to constitute the source and backbone of their philosophy.

In the philosophy of these writers we find $\phi v \sigma \iota s$ (Physis) to be a fiery, living, moving, ultimate essence permeating all things. From it, which knows no be-

30

¹ Bakewell's Source Book in Philosophy, p. 1.

HYLOZOISM

The first philosophy which will be taken up is that of the hylozoists as represented by Thales, Anaximander, Anaximenes, and Heracleitus, in which is prominent the idea that the whole world is a living being and that all matter is moving; living matter and moving matter being identical. All material elements of Nature are related in a common life. In this system we find evinced the belief that the universe is animated by an inner, fiery, vital principle which operates as a qualitatively psychic factor. This conception of an inner, moving principle of unity appears early among Greek thinkers, and naturally the question arose, what matter is most moving, most alive? What is this ultimate reality which affords a basis for all moving and

² Veazie, Studies in the History of Ideas, Ch. II, passim.

³ "Immortal and indestructible, surrounds all and directs all."

(Fairbanks, The First Philosophers of Greece, pp. 8-9.)

changing, and which continues to exist after the changes occur?

In answer to this question Thales replied that it was water, seeing that moisture was very essential in animal and vegetable life; also perceiving it to be very subtle and versatile, appearing in the forms of a solid, liquid, and vapor. He felt that the plasticity of matter furnished the possibility for everything to change, through water as the medium; all things have their origin in water and go back into water again. The active vitality of matter so impressed Thales that he taught the existence of a world soul, and that a divine mind was constantly at work. He would say according to Aristotle: "All things are full of gods. The magnet is alive; for it has the power of moving iron." 4 Thales' water, "the soul substance, possesses a superhuman mana, a dæmonic energy distinct from the natural properties of the water." 5

Plato quotes Thales as saying: "Is there any one who acknowledges this and yet holds that all things are not full of gods?" "Its motion and its power of generating things other than itself are due to its life $(\psi v \chi \dot{\eta})$, an inward, spontaneous principle of activity." 6 Thus in the hylozoism of Thales we have a dynamic conception of Nature which is inseparable from the modern energy concept.

Anaximander also was keenly conscious of the presence of an unlimited, active, vital force in matter, but

⁴ Quoted from Burnet's Early Greek Philosophy, p. 48. ⁵ Quoted from Cornford's From Religion to Philosophy, p. 135. ⁶ *Îbid.*, p. 128.

he did not give it the name of an element such as water. He called his the Unlimited or Infinite which is not only unlimited and infinite but is "without beginning, indestructible and immortal." This dynamic, inner life surging through matter is endowed by Anaximander with the possibility of "encompassing and guiding all things." We find Theophrastus saying that "Anaximander . . . said that the material cause and first element of things was the Infinite, he being the first to introduce this name for the material cause. He says it is neither water nor any other of the so-called elements, but a substance different from them which is infinite, from which arise all the heavens and all the worlds within them. . . . He says that this is eternal and ageless and that it encompasses all the worlds . . . and besides this there was an eternal motion, in the course of which was brought about the origin of the worlds." 7

Anaximenes, continuing the same dynamic trend of thought, said that air, with an inner vitality and force peculiar to itself, was the underlying and pervading principle in everything. Air is continually in motion and has the same relation to the world as man's soul has to his body. According to Theophrastus, Anaximenes says: "Just as our soul, being air, holds us together, so do breath and air encompass the whole world."

⁷ Quoted from Burnet's Early Greek Philosophy, pp. 54-55.

HERACLEITUS

In Heracleitus also we meet with a remarkable anticipation of the modern energetic attitude toward reality. In his philosophy he reaches forward to a fundamental principle in modern science, teaching that everything moves; everything is in a state of flux. Nothing abides; all things in Nature are changing into one another—are in a constant process of becoming. He called his primary cosmic substance, fire. It is not what we mean by ordinary fire but a something which changes into all things and into which all things can be transformed. It so permeates the last iota of all substance that in all matter there is the "ever-living fire." These changing processes, which are expressions of a restless vitality, are fateful, rational and just. Thus the world is explained in terms of a cosmic substance, a transforming force, fire, which continually burns but never burns out; man himself being a spark of fire struck off from, and at death becomes lost in the great cosmic Fire.

In this whole system there is a marked element of harmony characterizing all Nature, back of which is a Universal Order, Divine Law, whose force is intelligent and efficient, governing all things. Heracleitus calls this all-prevailing principle intelligent Will, Law, 9

8 Fragment 19—There is one wisdom, to understand the intelligent will by which all things are governed through all.

⁹ Fragment 91—The law of understanding is common to all. Those who speak with intelligence must hold fast to that which is common to all, even more strongly than a city holds fast to its law. For all human laws are dependent upon one divine law, for this rules as far as it wills, and suffices for all, and overbounds.

Justice, 10 Destiny or Fate, 11 Wisdom, 12 God. 13 It is both material and spiritual. In its fiery make-up it is identical with evident, tangible activities; as Law it becomes pure Form which abides amid all changing relationships. Do we not have here an interpretation of the world in its ultimate essence which is charged through and through with an unmistakable vitalism? Confirmation and emphasis are given this belief by the fact that to the original substance there is ascribed a spirit of appetency, which determined by Universal order—a rational Law—supplies the urge necessary to the conflicting activities by which Nature has come from a general substratum to the experience of specific individual identities. Heracleitus even carries this doctrine of activism over into his ethics and teaches that the "summum bonum" is reached chiefly through the medium of intellectual striving.14

DEMOCRITUS

We introduce at this time the philosophy of Democritus,15 the first materialistic system. An analysis of this philosophy is made, not because it belongs to the

¹⁰ Fragment 29—The sun will not overstep his bounds, for if

he does, the Erinyes, helpers of justice, will find him out.

11 Fragment 63—For it is wholly destined . . .

12 Fragment 65—There is only one supreme wisdom. It wills and wills not to be called by the name of Zeus.

13 Fragment 36—God is day and night, winter and summer, war and peace, plenty and want. But he is changed, just as when incense is mingled with incense, but named according to the planture of each

the pleasure of each.

14 Patrick's Heracleitus, p. 56 ff.

¹⁵ Democritus (460-370 B.C.). A native of Abdera, Thrace. He studied in the famous Atomistic school of Leucippus which was at that place.

history of energy systems but because it is the best example of a purely materialistic system/and must be carefully examined to show the limitations of a non-energetic system of thought; and also to show that this elaborate program of materialism, being without a vitalistic principle, offers a substitute for this seeming need.

Here, then, we find no vitalism, no idealism; everything is considered from a mechanistic standpoint. Democritus, taking up the work begun in Atomism by his master Leucippus, was the best representative of the Atomistic school. Naturally with him all phenomena are explained in terms of atoms and the impact of atoms. The atoms to which he reduces all substance are invisible, uncreated, solid, indivisible little bodies moving in empty space. Though alike qualitatively they differ in form and size. The various groupings or constellations of these atoms furnish a basis for all changing relationships. There is no moving force outside of them. Motion is a quality peculiarly their own; and as they move in space they mechanically strike each other. The impact causes the coming together of other atoms, and "thus worlds are formed as well as smaller objects from the original vortex." The fire atoms, characterized by mental activity, are the finest, smoothest, and most active. They are to be found not only in man but in plants and animals as well, constituting the soul life of that body of which they are a part. Man's superior mentality is due to a fuller abundance of these atoms. At death the fire atoms take their flight and the soul life ceases to be.

Democritus does not give to his atoms a kind of.

spontaneity as does Lucretius, nor feeling and will as does the materialist Haeckel. He does not fail, however, to make provision for the energy part of the world. He endows his atoms with original motion which enables them to experience independent selfactivity. Inherent in the nature of the atoms there is a tendency to combine. And also in making the fire atoms to be the principle of activity in all organisms, the real "soul stuff," endowing their motion with a psychical activity which permeates the entire organism, producing the "phenomena of heat and life," he presents a definite substitute for the dynamic conception of reality.

ARISTOTLE'S VITAL PRINCIPLE

In Aristotle's philosophy of the organic world we have an interpretation of reality which rises above the materialism of Democritus and is more practical than the idealism of Plato. He forsakes the conceptual bent acquired in his early training and builds a world of perceptual existence. He would say there are no ideas apart from individual things. "True reality is the essense which unfolds in phenomena." Matter and Form are the two facts constituting reality. There is a constant development in progress in the world which represents the endeavor of matter to find expression in Form. By matter he does not mean a hard, dead mass but an undercurrent of Being endowed with potentiality and possibility. By Form he means the ideas or

¹⁶ Windelband, History of Ancient Philosophy, p. 165. (Translation by Cushman.)

qualities which constitute the object. We can get Aristotle's conception of reality by using the illustration of a building in process of construction which would be something like this: "Matter is the stone in the quarry and wood in the tree. Here is potential being. Form is the idea of the future building as it is in the mind. Reality then is the building as it will be when finished." So of all reality.

Aristotle, however, was not so much interested in reality itself as he was in its causes. Thus we find him teaching that beneath the struggle of everything toward a higher and better realization of itself there is a dynamic quality which initiates and lends impetus to the movement, whether we call it idea, Form, or energy. Aristotle emphasizes the fact that there is no particle of substance from which this quality is absent. As matter strives to become Form—the potentiality to develop into actuality—it is moving toward its highest end in time, man; reaching out for the highest realization possible, perfection, which is God. This inner principle, the very soul of all things, is constantly moving every part of Nature toward a definite end, revealing a principle of purpose, which indicates a knowing quality. This force then inherent in all Nature is a rational principle of activity and has a real relationship to the energy theory of the present time.

EPICURUS AND LUCRETIUS

In Epicurus' conception of reality there is a program patterned after that of Democritus. There is nothing in the universe except innumerable, indestructible little atoms and empty space. In the beginning all atoms were falling in a straight line. Falling in empty space, they fell with the same velocity. Each atom has in itself a characteristic freedom, a psychical quality which was responsible for their swerving from their original path. Striking one another a nucleus was formed, finally objects, and the earth itself. Thus ultimate reality is found in this little body, ruling out an outside force, final causes, God. There is no system, no law, no purposive organization.

Lucretius, who belonged to this same school, in his didactic poem, *De Rerum Natura*, reëmphasizes the philosophy of Epicurus, further saying that only atoms and void exist. All things are the combinations of these two or an "event of these." ¹⁷ But he gives his atoms a certain spontaneity and free will, saying that the world, the same as everything else, is the spontaneous result of the combination of these little atoms which are the constituents of life. *In this idea of spontaneity* Lucretius makes a marked addition to the psychical activity suggested by Democritus and Epicurus, and hence gives to his atoms a genuine dynamic quality.

THE STOICS

In a study of the Stoics we find a system of materialism which says everything is matter, from God to the most insignificant thing. Matter is the mover as well as the thing moved. The whole universe is matter in

¹⁷ Lange, History of Materialism, Vol. I, p. 135.

constant motion. Nature not only operates according to law but is a supreme law in itself. It, however, is permeated by a force, a fire, a reason, which is a formative, governing, and vital principle. This principle with a power inherent in itself operates constantly in the process of development, guiding things to a perfect end. This force is the very central fact in the universe's existence. It is to the universe what the soul of man is to man, man's soul being but a part of the great Soul, the great pervading force. Consequently having here a vital force which is also rational, we have a qualitatively psychic and dynamic interpretation of reality.

Augustine, representing the church fathers, and one of the first subjectivists, in trying to locate certainty and reality said truth and reason are within one's self. These inner principles constitute the real life. "These are really God, for He is truth and reason." The more we learn the meaning of these inner experiences the closer we get to reality. With him then ultimate reality is God operating in one's self and life.

LEIBNITZ

We now come to that place in the history of the search for reality where the dynamic and vitalistic conceptions of reality which are found in Heracleitus, Aristotle, the Stoics, and even in Lucretius, come to an end for the time in the mathematico-mechanical conception of the seventeenth century. Scientific interest centers primarily in matter, space, extension and mo-

tion. There is one outstanding exception, however, to the suggestion that in this period all energetic theories are banished, and this exception is Leibnitz. His interpretation of reality will now be treated, remembering that he wrote later than Descartes or Spinoza, the chief exponents of the mechanical conception prevailing in this period.

Leibnitz attempted to do away with the old idea of the atom as a divisible little body, also to eliminate the single substance theory of Spinoza, and in this endeavor he built up in his monadology a theory which is fired through and through with a *dynamic conception of reality*. In his system the universe is made up of innumerable, indivisible little units called monads which are bits of force constituting the ultimate essence of all things, reality itself. "These primal essences or forces, which he calls monads, constitute the whole of reality; they are the fundamental elements of the entire material and spiritual world . . . they are contrasted with mere atoms in that they are not dead, inert particles, but instinct with vitality and movement." ¹⁸

In the world there are degrees of consciousness, ranging from low to complete states, corresponding to the make-up of the monads constituting the object. This fact of degree roots itself in the two kinds of quality which enter into matter so-called—passive and active. Passive matter obstructs clear perception while active matter represents pure perception.

In minerals the monads have a large measure of passive matter; consequently there is confused perception,

¹⁸ Alexander, A Short History of Philosophy, p. 320.

not fully conscious. In organic life a large number of the monads possess a greater proportion of active matter constituting a nucleus or governing center around which the other monads cluster. Naturally then in organic life there is a higher degree of perception, man standing at the head of the group. It is only in God that we find monads representing absolutely clear per-Thus individually and in groups, in all the activities of the universe, we find these little centers of force, with their own peculiar spirit of appetency, climbing toward higher realizations of being. The cause of the natural changes of the monads Leibnitz would ascribe to an internal principle, "since an external cause can have no influence upon their inner being." 19 Thus his philosophy becomes a fertile oasis of dynamism having its setting in a desert of dead mechanism.

As we have already suggested, in this period the current of philosophical thought runs from vitalism to mechanism. Descartes' philosophy well represents the change of attitude toward reality. In his system a distinction is drawn between conscious and spatial reality. Matter is diametrically opposed to spirit. There are really three realities, "self, God, and matter." God is the Absolute Reality and thus is the moving cause. The two secondary substances are dependent on the Absolute Reality, God. The chief qualities of matter are extension and motion, but matter is essentially extension, i. e., space. There is no place in this system for indivisible facts like atoms. The attributes or

¹⁹ Latta, Leibnitz—The Monadology, p. 223.

qualities of objects do not rest in objects themselves but are traceable to the creations of our mental activities.

He applies a mechanical conception to everything outside of God and self, denying mental states even to animals. Huxley was pleased because Descartes had been able to see that "the remotest parts of the universe are governed by mechanical laws including our own bodily frame, and attempted for the first time to account for all natural phenomena as only a simple development of the laws of mechanics with the effect of arriving . . . at that purely mechanical view of vital phenomena toward which modern physiology is striving." ²⁰

Spinoza, continuing the mechanical conception of reality characteristic of this period, makes no great, fundamental change in the philosophy of Descartes. Known as the God-intoxicated man, he taught the existence of but one substance, God. God and the world are identical. This infinite Substance has two attributes—mind and matter. There are things other than God which exist and yet they exist in Him; they are a part of God. God is everything; everything is God, might be considered a summary of his philosophy.

MECHANISM VERSUS DYNAMISM

The mechanism prevailing in this period to which we have referred would say "the substance itself does not change. All that changes is the relation between

²⁰ Cooley, The Principles of Science, p. 135.

the substances. These changes in relation give rise in us, as onlookers, to the illusion that the substance itself is changing its qualities," 21 thus making the world of mechanics tell the complete story of reality. This as over against the dynamic conception which would say "it is of the very nature of the substance spontaneously to produce new qualities and states." Thus according to mechanism the idea of an inner force directing to an end, or even present at all, is supplanted by the belief that all harmony, all changes are due to the mechanical interactions of parts and their relation to outside influences. As the principles of "adjustment, interaction, continuity, uniformity, and causation" play their part we have the secret of all activities. And as a result of the work of Descartes, Newton, Spinoza, etc., the dynamic theory of reality had to wait for expression until the nineteenth and twentieth centuries, at which time we are ushered into the biological, psychological, and dynamic era in which energy becomes the more basal concept.

In connection with the mechanical theories it is in order here to reach forward and mention the philosophy of Herbert Spencer, although his writings do not appear until after the middle of the nineteenth century. Spencer endeavored to show that all activities of the universe have as a basis of operation a fundamental principle, a persistent force.²² Then in at-

²¹ Marvin, A First Book in Metaphysics, pp. 184-185.

^{22 &}quot;As shown before, we cannot go on merging derivative truths in those under-truths from which they are derived, without reaching at least a widest truth which can be merged in no other, or derived from no other. And the relation in which it stands to the truths of science in general shows that this transcending demonstration is the Persistence of Force. . . . But

tempting to account for the way in which this principle reveals itself, he gives an interpretation of reality which is mechanical and unsatisfactory. He would say "the law of the continuous redistribution of matter and energy" is fundamental in all changes and relationships. As constant activity characterizes everything, in this constant movement there is an upward and downward process going on continually. The end of the upward movement is reached when like units are brought together in such way as to obtain a balance of stability. It is then when this point is reached that the downward movement begins in the process of disintegration. Thus the universe is one big piece of machinery whose parts are moving one way for a time and then another. All activities are thus reduced to a system of mechanism.

That such a dead mechanical view, which had been dominating in this field of thought for years and held by Spencer in the latter part of the nineteenth century, was unable to satisfy the mind (pragmatically insufficient) is shown by the new dynamic currents of thought entering from many quarters, all suggestive of the energy concept, several of which we shall take up at this time.

when we ask what the energy is, there is no answer save that it is the noumenal cause, implied by the phenomenal effect. Hence the force of which we assert persistence is that Absolute Force we are obliged to postulate as the necessary correlate of the force we are conscious of. By the Persistence of Force we really mean the persistence of some cause which transcends our knowledge and conception. In asserting it we assert an Unconditional Reality without beginning or end." (Spencer, First Principles, Sixth Edition. 175-176.)

KANT'S THEORY OF THE WILL

"There were those who said everything could be explained by natural science as a great world machine," but this attitude seemed cold and harsh to Kant, he feeling keenly conscious that there was something lacking in the philosophy prevailing at that time. It seemed to him to be out of touch with real facts, with real life. He aimed at supplying this seeming need.

In seeking the real facts of life Kant goes past the secondary world of phenomena and discovers a primary world of absolute values. Here we meet with human nature in which there is a marvel of beauty and dignity. In this realm of higher values we come in touch with real life, the innermost essence of man, the will. This ultimate fact, will, is untrammeled, free, supreme.

All law proceeds from the will for we can do just what we will to do. There is only one good thing in the world, a good will, and this striving will, acting as a unifying power, a synthetic activity, is the Alpha and Omega of all things. Thus Kant's system, the central, vital principle of which is a striving, energetic will, must be given a place in the list of dynamic philosophies, and a definite relationship to the energy concept.

SCHOPENHAUER'S PHILOSOPHY OF THE WILL

Schopenhauer makes will to be the moving principle, the vitalizing force, not only in man but in all Nature as well. This striving principle is common to all Na-

ture, nothing being too small or remote to escape its influence. It is the eternal and indestructible ultimate essence, the final reality in all things. Will not only reveals itself in external things but is matter itself. Our bodily movements, and the organs which enter into our experiences are but manifestations of a surging, striving will. "The brain is the will to know, the foot the will to go, the stomach the will to digest." ²³

Will is the force urging the grass to grow, the flowers to bloom, the tree to bear fruit, in short, all Nature to observe its uniform methods of behavior. It is the primary characteristic of all life, the lowest type being the willing to preserve life, the simple willing to live. From this lowest type there is a gradual rise in the series until the highest type is reached which is conscious, and is represented by man. The beauty and harmony of all Nature is due to the fact that there is but one will and this same will operates in all phenomena including man, its great objective always being the highest and best possible.

Striving for the best does not mean any particular end, for Schopenhauer rules out purposes. Thus all activities of the universe constitute a mass of constant, endless, irrational striving, the great driving motor being the will.

In this connection Wundt's philosophy of will units and Hegel's philosophy of spirit could be offered as dynamic theories as over against the mechanical theories advocated by Descartes and Spinoza. We

²³ Quoted from A Short History of Philosophy, Alexander, p. 501.

simply mention them here and later, under another heading, we shall offer a brief analysis of each.

HAECKEL

In each of the immediately foregoing systems of thought, indicative of modern belief, we find an active, striving, vitalizing force at work. So, continuing our line of thought which is characteristic of modern scientific presentation, we shall now turn aside for the time being and consider the philosophy of the materialist Haeckel, the monism-intoxicated scientist. It may seem out of order to introduce his system in connection with a study of the energy concept, but we shall give a summary of his philosophy and add quotations from his work, *The Riddle of the Universe*, with the purpose of showing that he actually gives to his atoms a quality of energetic striving.

He purports to represent a system of monism which rises above spiritualism and sheer materialism, as they ignore matter and teach the doctrine of dead atoms, respectively.²⁴ He would merge both into one and call it monism. There is but one substance into which everything roots itself. In this substance its two attributes, matter and mind, are linked together as one.

Very often Haeckel's representations are not altogether clear. In his explanation of some activities he points to the soul principle, and at other times pictures the psychical activities as representing the ordinary

²⁴ Haeckel, Riddle of the Universe, p. 20. (Translation by McCabe.)

functions of the brain, as rooting themselves in the central nervous system. Psychology is but a sub-head under physiology in his general presentation.

Though a heralded materialist he definitely gives to his atoms a quality of feeling, of will, of striving, which challenges the correctness of the classification which some are inclined to give his philosophy. His atoms seem to have an affinity for each other, a satisfaction in harmonious relationships and resent an interruption of these experiences. This unconscious, pleasurable affinity noticed in the lower strata of life is what we meet in the sexes of organic life, simply more highly developed in the latter, for this fundamental unity of affinity is found in all Nature.25

This program which places all vital phenomena under mechanical processes of life, even making psychic activities dependent on a definite material substratum, like all other phenomena, later adds that "covering the whole field of organic and inorganic nature the two fundamental forms of substance, ponderable matter and ether, are not dead and only moved by extrinsic force, but they are endowed with sensation and will; they experience an inclination for condensation, a dislike for strain; they strive after the one and struggle against the other." 26

In speaking of the atom Haeckel says it "is not without a rudimentary form of sensation and will, or as it is better expressed, of feeling and inclination—that is a universal 'soul' of the simplest character." 27

²⁵ *Ibid.*, p. 224. ²⁶ *Ibid.*, p. 220. (Italics are mine.)

²⁷ Ibid., p. 225.

would carry this same principle of activity into the molecule.

In speaking of ether, which is boundless and immeasurable, he says: "It is in eternal motion, and this specific movement of ether in reciprocal action with mass movement is the ultimate cause of all phenomena." ²⁸ The question naturally arises as to what causes the ether to move or the mass to reciprocate. He would say "the conversion of one form of energy into another, as indicated in the law of the persistence of force, illustrates the constant reciprocity of the two chief types of substance, ether and mass." ²⁹ But this does not answer the question as to the fundamental cause of change.

Haeckel would make the law of reciprocity dominate the elaborate performances of the nervous system itself. But even when saying that "movement is as innate and original a property of substance as is sensation," he is not fully clear as to cause. It is when speaking of the evolutionary division of mass and ether that he ascribes the real cause of change and which cause embodies a vitalistic conception—"this division so effected by a progressive condensation of matter as the formation of countless infinitesimal centers of condensation in which the inherent primitive properties of substance—feeling and inclination—are the active causes." ³⁰ Thus there is a "unity of all natural forces" which is the "monism of energy." ³¹

²⁸ Haeckel, Riddle of the Universe, p. 228.

²⁹ *Ibid.*, p. 230.

³⁰ Ibid., p. 243. (Italics are mine.)

³¹ Ibid., p. 254. (Italics are mine.)

OSTWALD

Among those scientists of modern times who have presented definite energy theories, a prominent place must be given the philosophy of Ostwald.³² Here we meet a system in which force or energy is established as the primary concept; the concept matter being classified as a secondary phenomena, having its origin in the association and mingling of certain energies. According to Siebert,³³ Ostwald means by energy everything that grows out of work and everything that can be transformed into work. The explanation of all occurrences in the whole of Nature rests in an understanding of the activities and shiftings of energies in space and time.

There is a continual process going on in Nature of distributing and gathering energy. If a living being is to continue life it must, by an initiative and energy all its own, gather unto itself quantities of energy sufficient not only for preserving life but in addition thereto, for it is thus that it makes possible its continuance in the preservation of the species. When the barriers of resistance against which the organism has to fight, as it gathers energy, become stronger than the latter, then the living form dies. As the body takes in energy the nervous apparatuses constitute the medium for the transmutation of the energy into activities.

33 Geschichte der neuren deutschen Philosophie seit Hegel, Siebert, pp. 302-305.

³² Wm. Ostwald (1853-), Professor of Physical Chemistry at Leipsic.

It is thus seen in the history of thought that it would be impossible successfully to relegate to the background the strong tendency to dynamism. It has been in this type of philosophy that the scientific as well as the everyday type of mind has found most genuine satisfaction. Confirmation of this attitude is seen in the seeming fact that those systems have been lasting as well as satisfying which have been built around an energetic conception. It is not strange then that modern thought is speaking out definitely in support of an energetic interpretation of reality.

CHAPTER III

THE DYNAMIC TREND IN MODERN PSYCHOLOGY

There is so much in modern psychology which has a strong bearing on the energy concept that no one writing in this field would fail to mention the definite current of thought in contemporary psychology, setting in the direction of an emphasis upon the will and conative element in our mental life. These together with the voluntaristic tendency of thought, the Freudian wish, the emphasis placed upon feeling, self-regard, and fear, all indicate a relationship to an energetic conception of reality which cannot be overlooked.

In the search for the cause responsible for the "pull" or "urge" which is so evident in human nature, the psychologist naturally goes into the realm of the mental life, for it is here that the fundamental element in all activity is to be found. Modern thought, however, is not stopping with the intellect; this seems to have had its day. This fact is very clear in Bergson who in trying to organize the delicate machinery of the inner life definitely relegates intellect to a subordinate place. With him intellect seems to be in a foreign field when trying to deal with the life of the body and mind. Intellect is unable to get hold of life. It seems to be at home in dealing with the inert; always mechanically applying the forms of unorganized matter. Here only

does it seem to find complete satisfaction. Intellect simply takes things as they are given to it and tries to organize them. When we come to those things which flow from the heart of the living we begin to talk in terms of behavior and give a primary place to instinct, impulse, will.

We are not dealing simply with that which enables us to know things but with that something which is continually drawing to the yes-side and no-side of life, as situations demand decisions. Is this something due to a mechanical organization of our dispositions predetermined at our very inception in life? Or is it due to organized persistent energy or endeavor characteristic of all life? Modern psychology believes the latter to be the case.

The school of voluntarism, wielding an important influence in psychology to-day, will have but little to do with intellect, putting emphasis on the will instead, saying that in this we meet finality. As individual purposiveness characterizes all our actions, the factor guiding to this end is the will, playing continually the volitional rôle peculiar to itself. Our inward experiences then, controlled by the will and of which we are immediately conscious, reveal ultimate reality and constitute a willing dynamism.¹

Wundt is an able representative of this school of thought which gives such a large place to the will. With him voluntary action is feeling in which the will asserts itself. "The feelings of each moment unite in a single total feeling; this total feeling is the resultant

¹ Perry, The Present Conflict of Ideas, pp. 205-210; 454-459.

volitional tendency." ² Volition finds its causes in motives, but for a motive to be effective it must be associated with a willing self. And since volition has its origin in internal processes "it is at once clear that motives must be internal psychical causes."

According to Wundt the connate impulse roots itself in an interplay of psychical processes, as seen in the actions of a hungry infant. This impulse is "physiological in its ultimate basis but springs directly from psychological conditions which may at any time interfere to modify its original character." Thus we have in this psychology an interpretation of reality in which there is an underlying, energetic principle dominating the whole category of life's activities.

In James' psychology we also find much stress put upon the will as an ultimate factor in the execution of purpose. He would say that the triumph of a motive or the realization of a desire is due to their being held fast before the mind at the focus of consciousness and that this is accomplished by inhibiting all other ideas competing for domination. Thus there is much in real will power.

Bergson finds no satisfaction in a mechanistic interpretation of reality nor in a theory of finalism.⁴ At every turn in his system we meet activity, back of which is an energetic impulse. With him mind is "a force working, seeking to free itself from trammels and also to surpass itself, to give first all it has and

² Wundt, Human and Animal Psychology, p. 234.

³ Ibid., p. 401. ⁴ Bergson, Creative Evolution, p. 87. (Translation by Mitchell.)

then something more than it has." 5 When speaking of mind he means, above everything else, consciousness; and to this he ascribes heavy responsibilities, all of an active nature. The most obvious feature of consciousness is memory. Consciousness, however, not only retains the past but anticipates the future as well. In the performance of these two primary functions, its chief rôle is to decide, to choose. feels that "whether we consider the act which consciousness decrees or the perception which prepares the act, in either case consciousness appears as a force seeking to assert itself in matter in order to get possession of it and turn it to its profit." 6 "The evolution of life, from its earliest origins up to man, presents to us the image of a current of consciousness flowing against matter determined to force for itself a subterranean passage." 7

With Bergson consciousness cannot be explained apart from matter, and vice versa; and even matter itself he makes to be of an active type. In his Creative Evolution he says that matter is the inverse of consciousness. While "consciousness is action unceasingly creating and enriching itself . . . matter is action continually unmaking itself or using itself up." A creative consciousness is continually striving against matter. "Things have happened just as though an immense current of consciousness, interpenetrated with potentialities of every kind, had traversed matter to draw it towards organization and make it, notwith-

⁵ Bergson, Mind-Energy, p. 27. (Translation by Carr.)

⁶ Ibid., p. 22. ⁷ Ibid., p. 27.

⁸ Ibid., p. 23.

standing that it is necessity itself, an instrument of freedom." 9 In seeking to account for the origin of consciousness and matter he suggests that they both have a common source.

As we go deeper into Bergson's philosophy the question naturally arises, What is the secret of this ceaseless struggle? And then we learn that there must be an "impulse driving it (life) to take ever greater and greater risks toward its goal of an ever higher and higher efficiency." 10 He explains this ultimate guiding and developing element in Nature by what he calls the vital or original impetus. This vital principle continually operates in a way very suggestive of the energy concept. As generations of germs come and go, this impulse, in the processes of evolution, continues to abide. Thus it is fundamental to the formation of variations and especially those new species which are permanent. As variations begin to appear they may become further and further from the original and yet may in particular ways show not only similarity, but identity as well, the original impetus being responsible for the situation. Thus Bergson's whole system is seen to be distinctively dynamic.

McDougall, like James, would emphasize the will, saying that when two motives are competing for supremacy the will is thrown on the side of one of them which leads to a volitional decision; we thus "in some way add to the energy with which the idea of the one desired end maintains itself in opposition to its rival." 11

⁹ Ibid., p. 25.

¹⁰ Ibid., p. 24. 11 McDougall, Social Psychology, p. 246.

But McDougall feels that there is something back of all this and suggests that "human activities, both mental and bodily are only to be explained or understood by tracing them back to a number of innate dispositions, tendencies to feel and act in certain more or less specific ways, in certain situations . . . like the similar innate tendencies of the animals." 12

Thorndike in his "Educational Psychology" says "these innate tendencies too bear the impetus and means to their own improvement." This makes them somewhat independent, self-directing and supporting. Thus we find many psychologists are pointing to the field of instincts as having a vital connection with all experiences, maintaining that "each instinct is a great source or spring of the psycho-physical energy that supports our bodily and mental activities."

In modern Psychology we also find self being stressed as the abiding entity. Naturally then much is made of the self-regarding sentiment. According to Freud and his school, in the heart of this self is an unburied wish, which is persistent, imperishable and unfulfilled. This wish as a vitalistic element is so persistent that it is continually appealing for a chance for expression, and if thwarted once, will appear elsewhere, again and again, perhaps in a new form.

Fundamental to all thought and activity is this ever striving wish, which is inherited from one generation to another. "Inherited wishes . . . are pulses of energy and not organic structure. Can the wish of

¹² McDougall, Social Psychology, p. 385.

the parent arouse the same wish in the offspring? Yes, if the wish is a pulse energy and not a structural product. The pulse which is a wish in consciousness passes through the whole organism affecting every part to some degree. The child in the womb or undischarged sex cell would be somewhat altered by the pulse. . . . The child thus receives the wish pulses aroused by the parent." 13 This wish then is an undying energetic principle running in the middle of the stream of human nature. As an active principle inherited from one generation to another, it reminds us somewhat of Bergson's original impetus which passes from one generation of germs to another, and which we have suggested as being very similar to the activities of a restless energy.

Not only the Freudian school but others as well would root all these processes in the sex impulse. In the last few years there has been much of sex in psychological literature, as seen in the works of Freud, Hall, Ellis, and others. Barton, recognizing the relationship between religion and adolescence, says sex is the predominant source in religion. As a background of proof for this attitude reference is made to the genetic account of relationship of sex to religion in which it is shown that the curve of conversion which is the religious awakening, harmonizes with the frequency of accession to puberty, the peak for boys coming at the age of sixteen and seventeen and for girls thirteen and fourteen.

But the fact as to whether or not this innate ten-

¹³ Patten, The Monist—Article on the Divided Self.

dency, this inner striving, this vitalistic principle with its processes roots down into the sex instinct does not interest us so much here as the fact that much in modern psychology in teaching the presence of an innate tendency, is leaning toward a dynamic interpretation of life, and thus makes its definite contribution to the establishment of a relationship between this field of thought and the energy concept.

Even in the philosophy of life itself, as it is being lived by the multitudes to-day, we meet a strain of the energy concept. Such terms as "up and doing," "wide awake," "full of life," "on the go," "full of pep," all bespeak life with a large expenditure of energy. And this is present day life. The passive life is altogether out of harmony with the spirit of the times. The gospel of to-day is that of action.

Rudolph Eucken in his philosophy of activism is the apostle of this type of thought. His works beam with a dynamic interpretation of life. Passivity is diametrically opposed to his idea of real life. The individual who plays only a passive part in life's work not only fails to make his expected contribution but fails in the development of his own self. We find ourselves only as we fight to work out our own salvation. We cannot expect to

"Be carried to the skies On flowery beds of ease,"

but must

"Fight to win the prize, And sail through bloody seas." We come to the full realization of the beauty and worth of life only as the spiritual self triumphs over the resistance which it meets in the world. Activity is the only avenue through which one can take his place in the world of real values. Thus a life full of energy and organized toward right ends is reality itself.

So we see that in the philosophy of the past, in contemporary psychology, and even in the philosophy of life there is strong support for the attitude of modern science which is definitely declaring its belief in a dynamic conception of reality.



PART II: ENERGY AS A SPIRITUAL FORCE



CHAPTER I

THE SPIRITUAL INTERPRETATION OF ENERGY

In the first part we set out to learn, if possible, the identity of that something which in the midst of unceasing change, continues to abide; that something which constitutes the ultimate essence of the world. It was seen that the search for ultimate reality was not anything new but that the inquiry concerning final reality constitutes a strong current in the general stream of philosophical endeavor. Finally, we came to the conclusion that that abiding something is energy and endeavored to show that from the standpoint of science and philosophy the whole universe is to be conceived in terms of energy.

Also it was seen that many of the profound thinkers recognized a mysterious, dynamic principle in Nature and ascribed to it wonderful possibilities. This energetic conception seemed to prevail until the seventeenth century when a mechanistic interpretation began to predominate. But science and philosophy seemingly failed to find satisfaction in a cold, dead, mechanical system, with the result that the dynamic conception of reality began to reappear, receiving a new emphasis, until to-day science is speaking out boldly, saying that not only does dynamism justifiably take precedence

over mechanical materialism but that reality itself is energy.

THEORIES OF ENERGY

There are several theories of energy as outlined by Cooley in his book, *The Principles of Science*:

- (1) Energy is given a place as substance beside matter; it is made to be a universal, formative agency. Matter is the means through and by which energy accomplishes its purposes, the something which it shapes. This, then, is a dualistic attitude, there being two substances—energy and matter.
- (2) The second view makes matter the only substance, and energy is simply the name representing its activities. Energetic phenomena are simply matter in action. So we call heat, chemical affinity, electricity, etc., different forms of matter's activities.
- (3) "We may think of energy as the true fundamental substance of the world, and matter as one of its modes, its more highly organized form. This is the conception embodied in the electronic theory of matter, or at least in one form of it. According to that conception fundamental existence is essentially active—a heaving ocean of being—but it is not active matter; it is that more subtle, weightless agency which we call electricity. This, which is the real agent in all that goes on in the physical world, the root of all natural forces, exists in the form of more or less discrete and extremely active units (electrons).\(^1\). Thus we may think of it as itself the one fundamental

¹ Cooley, The Principles of Science, pp. 126-127.

(physical) existence, manifold in all forms, ceaselessly active in its nature." ²

It is the third view which modern thought is coming more and more to accept. And the more we study the present scientific attitude the more are we amazed at the large field of facts which the term energy is selected to represent. Thus it seems that at this time, by way of explanation, it should be said that the word energy with its established meaning in our vocabulary is really not big enough to represent all that science means when using the term. Since we are making energy stand for so much, it would be more satisfactory if a new word had been introduced into the list of scientific terms. With these facts in mind regarding the use of the term energy we now approach the immediate task of endeavoring to interpret what seems to be the facts of its inner content.

THE SPIRITUAL HYPOTHESIS

Having reached the conclusion that reality is energy, we now want to know what this energy is. Ours is an ontological problem and naturally leads us in our inquiries into an attempt to obtain a critical understanding of what "being" really is. Apparently the old philosophers were satisfied to say that reality was earth, air, fire, water, etc., and being just pioneers in the field of scientific investigation could not with positive assurance get close to the heart of their problems. Science to-day is past the place where it is willing to take very much for granted and is dissatisfied unless it

² Ibid., p. 128.

can get on the inside of its investigated subjects. With the models of the centuries at hand and with accumulated insight and improved scientific methods, we have a right to expect a scientific progress commensurate with the advantages which the present enjoys, in relation to the past. So we must not stop with the general concept of energy but inquire concerning its qualitative aspects.

Since science to-day is operating on the assumption that energy is that element fundamental to all forms of existence and which represents the final analysis of all things, it is logical for us to adopt the short-cut method and simply knock at the door of chemistry and physics and ask, What is energy?

We go to the physicist and ask him for a definition of matter and he tells us it is "an aggregation of electric charges." If we ask for a definition of energy he says it is the "capacity for doing work"; and if urged to be more concrete he may say it is "force times the distance." Then if we ask for a definition of reality we are told that that does not belong to physics but to another field of thought, philosophy.

Thus we make the discovery that the scientist concerns himself very little with our side of the problem. He deals with energy chiefly in its quantative aspects and is not as persistent in his endeavor to make a qualitative analysis. It seems that the interest of science in this latter phase is measured and determined by the amount of philosophy which happens to be therein.

"Who or what moves bodies, in the sense of agency or potency, is for scientific purposes a negligible question." 3 In dealing with energy the end of the physicist and chemist are met primarily in the mathematico relationships.

In our study of the energy concept, we are interested in this problem from a qualitative standpoint. The "number, length, breadth, volume, interval," etc., will not suffice for our purpose; nor is it satisfactory to stop with saying that things behave thus and so as they are influenced by certain causes. We want to go deeper than this and know "why" and "how" these causes operate. And since our immediate objective is to analyze reality qualitatively, we have a goal, therefore, which is very different from that which could be reached by means of mathematical science.

In probing into the question concerning the attributes of energy we read with great interest, in de Tunzelmann's Problem of the Universe, the statement that "the concept of the ether has led us to the conclusion that energy is a more fundamental concept than either ether or matter. It is therefore more fundamental than the concept of mass, so that the indicated path of progress is not the remodeling of our representation in order to make it capable of simpler expression in terms of a system of dynamics in which mass was regarded as fundamental. What we have to contemplate is, in my opinion, the remodeling of our system of dynamics on the basis of energy in the place of mass. We may then begin to contemplate the ultimate possibility of a future remodeling in which mind

³ Perry, Present Philosophical Tendencies, p. 53.

will replace energy as the fundamental basis of the physical scheme." 4

Chamberlain lends emphasis to this attitude in saying that "an immeasurably higher evolution than that now reached, with attainments beyond present comprehension, is a reasonable hope. The forecast of an eon of intellectual and spiritual development comparable in magnitude to the prolonged physical and biotic evolutions lends to the total view of earth-history great moral satisfaction." 5

Also, Perry says, "If it is impossible to construe the world in terms of thought or in terms of moral life, there yet remains a further conception, complete enough to embrace these and every other possible value—the conception of a universal spiritual life that shall be infinitely various and infinitely rich." 6 attitudes point to the same possible conception of reality; they stress the spirit concept.

Since, as we have suggested before, physical science offers no answer to our legitimate demands for a qualitative interpretation of energy, we are therefore forced to make our own hypothesis respecting its inner nature; and are encouraged by the tendency of modern thought, as mentioned above, to champion a belief in the hypothesis which says that energy is of a spiritual, psychical nature.

This hypothesis is what in philosophy is called spiritualism, and gains for its support whatever

⁴ de Tunzelmann, Preface to The Electrical Theory and the Problem of the Universe, pp. 15-16. (Italics are mine.)

5 Chamberlain and Salisbury, Introductory Geology, p. 684.
6 Perry, Present Philosophical Tendencies, p. 153.

strength there is in this system of belief. There are many important facts in philosophy with which spiritualism is in harmony and whose problems this theory helps to solve. While on the other hand, any theory which opposes these outstanding facts or leaves them without explanation, must in its very nature be looked upon as incomplete. In the approach to this part of our task, ours is a virgin field. We repeat, while science is looking upon reality as energy it offers no qualitative interpretation of energy. This being true, the spiritualistic hypothesis, as such, is legitimate, and since it will be verified as far as it explains things which need explanation, can demand a respectful hearing.

THE SPIRITUAL HYPOTHESIS AND THE CREATIVE IDEA

In the first place, a spiritual interpretation of reality helps to solve the problem of creation. There is a prevailing notion in modern thought that creation is not a finished fact, a thing of the past, but as a principle inheres in the life of the present. "Traces of evidence are lately beginning to come into view, which are highly suggestive of continuous present day creation of matter at the inorganic level, and of creation of life from inorganic materials at the organic level." 7 A creative workmanship seems to be characteristic of all Nature, underlying which is a dynamic, energetic principle. This vital, creative impulse is continually reaching its objective. It is not strange, then, that in the recent movements of thought we should meet repre-

⁷ Moore, The Origin and Nature of Life, p. 31.

sentatives of creative evolution, creative synthesis, creative intelligence. It seems there is no fact in modern philosophy which looms up quite so large as the creative idea. But in this incessant life of continuous creation there must be more than an interplay of mechanical agencies. A creative activity is difficult to conceive apart from spirit.

THE SPIRITUAL HYPOTHESIS AND VITALISM

Again, we have seen how general is the stream of vitalism which runs through philosophical and scientific thought. It holds a prominent place in the history of thought because there are strong evidences of it in Nature. If there are remarkable evidences of a vitalistic principle in Nature we are justified in believing it to be there. Even the "naked eye" reveals to us Nature throbbing with a fervent life. In fact we have concluded that reality is energy. Can we think of a vitalistic principle rooting itself in mechanism? Hardly so. Nor can we conceive of vitalism out of relation to spirit. History and personal experience have clearly shown that a mechanical "letter of the law" program kills, while it is the spirit which gives life. Interpreting energy spiritually seems to furnish the only explanation for the presence of the vitalistic element inherent in Nature.

The mechanistic interpretation may satisfy in a limited way but unless spirit is posited back of all this, it is impossible to beat down the troublesome question, Whence came this great piece of smoothly working machinery—the universe? Here the me-

chanical materialist, although applying his interest intensively to other tasks, takes things as he finds them and asks no questions. It is genuinely inconsistent and unsatisfactory to pass up the problem of origin in this way; it smacks too much of incompleteness.

THE SPIRITUAL HYPOTHESIS AND TELEOLOGY

In observing the harmonious relationships characterizing the activities of the universe, most thinkers are inclined to say with Tennyson,

"Yet, I doubt not through the ages, one increasing purpose runs."

And Henderson, speaking as a bio-chemist in the Order of Nature, stresses the impossibility of ignoring the fact that there is a purposive tendency in things. The evident expression of intelligence which is met everywhere has been explained by many as a teleological provision on the part of a great Designer. There is evidence of teleology in Nature, but the old system of teleology is not satisfactory, because it makes God too much of a transcendent Being. Realizing that the kingdom of heaven is within us, modern thought is making him less of a sky God and is giving him his rightful place in the very heart of life. He is not only transcendent but is immanent as well. It is inconceiveable that a ruling King should be living outside his kingdom.

Many teleologists are thus modifying their attitude somewhat and are advocating what might be called an immanent teleology. The problem of an intelligent principle guiding all existing forms to the highest ends possible, easily finds its solution in a spiritual system of reality.

THE SPIRITUAL HYPOTHESIS AND EVOLUTION

Then, too, a spiritualistic program helps with the problem of evolution. It is a well-known fact that the discovery of this theory has revolutionized science. Modern thought is strongly inclined to a belief in creative evolution, and this principle being true, its cause can hardly be found in a cold system of materialism. Generally speaking, there seems to be a missing link in evolution. If one is willing to stay on the outside and simply take facts as they come, then probably a general mechanical theory of evolution will suffice.

There are those who would follow in the footsteps of Hobbes and apply a mechanical interpretation even to the facts of the mind, thus reducing all mental phenomena to a system of physics. But this method would force us to live in a lifeless age, similar, for instance, to that outlined in Pearson's *Grammar of Science*. And also, a system such as this fails to account for the richness and reality of human experiences. No human being would be satisfied to live in a world which could offer only hypotheses. Thus we cannot afford unreservedly to adopt a system which can only say "it happens so every time," mere chance, and then stop with that.

The evolution of progress can find no justification in the realm of chance; nor can it be explained by a

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system of mechanism. It is when we place spirit at the bottom of the whole evolutionary process that evolution becomes more reasonable and complete; and a satisfactory explanation of its inner working is given, for we have thus introduced the possibility of a vitalistic, knowing quality.

CHAPTER II

HISTORICAL SUPPORT FOR THE SPIRITUAL THEORY

Early in our work a study was made of the philosophy of those men in whose systems could be found a strong dynamic element, the purpose being to show that from the beginning of philosophical inquiry an energetic interpretation of reality has characterized many of the strongest systems. Now we shall pass in review some of those writers whose conceptions are distinctively spiritual, confirming our attitude that many of the best students working with the problem of reality interpret it spiritually, thus helping to establish the hypothesis that energy operates as a spiritual force.

LEIBNITZ

In Leibnitz' philosophy we have what is perhaps the most elaborate spiritual system ever formulated. His interpretation of reality has already been presented, because of its dynamic, energetic qualities, suggesting a close relationship to the energy concept. A's our immediate interest now has to do with the qualitative aspects of this concept, his theory is re-stated somewhat in detail, from the angle of its spiritual import.

Leibnitz resolves everything into centers of psychic, spiritual force which are without parts, extension or

form and are indivisible and immaterial. In the Atomism of that day these little units were material but with Leibnitz they were distinctively spiritual. These "simple substances" constitute ultimate reality; they differ from each other in quality but not in quantity, each being self-sufficient and a little world unto itself. This is somewhat similar to the modern idea of the atom which elsewhere we have likened to an independent little solar system.

Not only are the highest types of being concerned, but the very substance of all reality is found in these psychical, spiritual units. The lowest classification is to be found in minerals, plants, etc., and here the centers of force are called monads. Here we meet perception just the same, but it is not clear or conscious, the grade of thought being something like a stupor. Also here as in all forms of being each monad has in itself a principle of striving to a higher condition of activity or perception. The clearness of perception is not only proportionate to the activity of the monads but conditions their grade or classification. The confused perception of the lowest state is illustrated by the wave sounds of the sea; we know that each wave makes its individual contribution to the general sound, yet it is impossible to perceive them separately, the attempt resulting in confused perception. This is the characteristic thought life of minerals and plants.

The psychical, "simple substances," fundamental in all Nature, whose perception is more distinct and associated with feeling and memory are called souls. Memory which is the sign of consciousness is the dif-

¹ Latta, Leibnitz: the Monadology, p. 221 ff.

ferentiating factor between the lowest types of being and animal life.

Human beings have a clear perception and thus live in a higher scale of being. Having reason and knowledge, they can come to a knowledge of themselves and even of God. This quality in man is called rational soul or mind. There is just one Being who experiences the full power of perception, God, who is infinite and absolutely perfect. Thus we see the whole universe to be alive with thought, the principle of perception prevailing from the most insignificant thing up to God.

In his "Monadology" then Leibnitz has built up a vast, closely woven system of spiritualism. All reality roots itself in psychical centers of force. These, while individually self-sufficient, together constitute all Nature. In the smallest portion of matter there is a large group of these active, living monads. "Each portion of matter may be conceived as like a garden full of plants and like a pond full of fishes. But each branch of every plant, each member of every animal, each drop of its liquid parts is also some such garden or pond." 2 Each living body has its central or ruling monad. Then each member of this living body is full of living creatures clustering about a central monad or soul. These little particles surrounding the ruling soul continually but slowly change, thus never giving the soul an entirely new body, while the soul itself does not change. The central monad is always associated with some such body of changing creatures, God being the

² Latta, Leibnitz: the Monadology, p. 256 ff.

only Spirit free from a body. No matter then to what forms of being we might appeal, spiritual centers of force are found to be fundamental to all reality.

HEGEL

In Hegel's philosophy "everything is spirit; spirit is everything." The ultimate essence of the universe, its true reality is found in this self-operating, inner spiritual principle which is fundamental to all Nature. Spirit finds expression in three forms, subjective, objective, and absolute, covering the entire field of activities.

The subjective spirit strives through the power of the will to bring the spiritual life of the individual to that place of experience where it is free and independent of its environment, and is not satisfied until it reaches the goal of its ambition. The objective spirit is identical with the spiritual life finding expression in the everyday phases and functions of life. Here the will asserts itself in the forms and customs common to human relationships. In a particular institution, for instance, we have a single manifestation of the allpervading spirit. The absolute spirit is the blending of the subjective and objective spirit. Here we have an active, unifying consciousness, absolute reality itself. All differences between subjective and objective experiences fade away. This self-assertive, absolute spirit moves up into satisfied realization chiefly through the forms afforded by the fields of art, religion, and philosophy.

WUNDT

Wundt has built up a system of idealism, which reminds us somewhat of Leibnitz' theory of monads. Leibnitz made his monads centers of perception while Wundt makes his units of will. Here we do not hear so much about matter, substance, mind, and soul, but speak in terms of ideas, psychical processes, will units. His whole system is built around the activities of the will, for it is the only thing of which we are definitely sure. "There is absolutely nothing outside of man, nor in him, which he can call fully and wholly his own, except his will."

All experiences cluster about the will, not because there is an external initiating force, but because in the will and only in the will itself there is a spontaneity of activity which is responsible for all relationships. The organization of activities toward ends originates and is sustained by the psychical processes representing the will.

God is the universal Will and its objectivation is the realization of itself in the will units of the world, in which there is an opposition of activity and passivity, constituting ultimate reality. It is only as every will is related to wills that this reciprocal relationship is obtained and it is only in these reciprocal experiences, which offer an explanation for the passive state, that we have reality.

SCHOPENHAUER

To get Schopenhauer's idea of the qualitative aspects of reality we must understand what an important

place he gives to will. He would say the very essence of life is the will. This principle will is inherent and dominant not only in man but in all things. It is the guiding, driving force in the general process of evolu-In the principle of selection which seems to be operating all the time, it is the will which causes certain parts of the organisms to grow and adjust themselves for particular duties while at the same time allowing others to die. For instance, some animals are equipped with instruments for fighting and killing, because that is what they will to do. The will not only aids in the organization of the organisms but enjoys a preexistence in relation to them. Amid all those things which come and go, it is the abiding fact. All things are the product of the will. The world is but this principle realizing its great ends. The will is much greater than the phenomenal world which is just the object of thought; it is greater than thought which is simply its by-product. This striving principle then, which is reality for Schopenhauer, must be given a setting in spiritualism far above everything that partakes of the material.

PLATO'S IDEALISM

The philosophy of Plato is presented at this time in our study of energy, not because it is energetic but because his elaborate system of idealism makes a large contribution toward the unfolding of our immediate problem—showing that reality is to be interpreted spiritually.

In Plato, the first and greatest idealist, we meet an

exalted and beautiful system which believes there are higher realities than matter and motion and the world of sense perception. "Plato points up, Aristotle down." Most fundamental in his philosophy is the search for ultimate and absolute values, the abiding and unchanging elements in the flux of phenomena. Plato believed with Browning that there is a right ever right and a wrong ever wrong.

True knowledge does not come to us by way of the senses. Such knowledge, often being deceiving, is simply opinion. The highest type, the scientific, comes from the mind through thought and reason. Matter is not the reality of the world. Plato would say with James that the world of wind and weather is not the real world. Outside the scope of the senses is another realm, a spiritual world, the realm of ideals, of values. It is possible for us to rise above the world of shadows into this realm of being, into the real world of ideas.

With Plato, ideas only are real; all else is simply appearance. These ideas are incorporeal, immaterial, but are hardly psychical or spiritual according to the modern interpretation of these terms, ideas belonging to even a higher state of being than the psychical or spiritual. He would place the psychical functions in the world of Becoming and would place ideas in the realm of Being. Ideas are not necessarily in the mind but are essences, ideals, the highest and best being those of the Good. In this program $\varepsilon\iota$ $\delta o\varepsilon$ is that something which science has been eagerly striving to know, reality itself. "The world of true reality is but never becomes; the world of relative reality becomes but never is."

"The unfathomable depth of human personality is essentially Plato's doctrine." Reality is divine and the soul is akin to it. The Soul is a simple, incorporeal being belonging both to the world of ideas and the world of sensuous material change, but belongs primarily to the higher world. It is the principle of life and motion.

Hence Plato is considered the father of idealism, and as over against mechanical force, he makes intelligence to be the real moving power in the world. This places him in the forefront of those who have taught the presence of the invisible soul operating in Nature, and who have given an interpretation of reality diametrically opposed to materialism.

SYSTEMS PARTIALLY SPIRITUALISTIC

There are four important systems of thought which probably have no definite place in a program whose chief immediate interest is in trying to show that all things are of a spiritual nature, even the very world of "material phenomena"—Aristotle, the Stoics, Descartes, and Kant. Especially is this true of the Stoics who were really materialists and of Descartes with whom mind and matter are equally real. And while these systems, by no means make spirit all of reality and cannot even approach being classified as spiritualistic, we mention them here, parenthetically, to show how unable were the leaders in these schools of thought to complete their systems without giving a "real" place to spirit. This is particularly true of Kant's philosophy, but let us first examine Aristotle.

ARISTOTLE

To understand Aristotle's philosophy of reality it is necessary to know his meaning of $|\psi \nu \chi \dot{\eta}|$ because it is to this that he gives supreme place in all life and activity. With him $\psi \nu \chi \dot{\eta}$ (breath) is more than we mean by soul; it really represents what is wrapped up in the terms Life and Mind, and we have no English word which can represent the combined thought. Sometimes it is called Vital Principle, sometimes Soul. This Vital Principle, though there is just one, has its representation in every part of the body. It and the body are not one, but they so relate themselves to each other as to constitute a unity. As Life finds its highest expression in Mind, so the chief characteristic of the Soul or Vital Principle is thought.

This Vital Principle is the essence of Life. It is "the original reality of a natural body endowed with potential life. . . . If then there be any general formula for every kind of Vital Principle it is—the primary reality of an organism." It is a vitalizing influence, not only holding the body together but constituting the energy of the body. This is true not only of man but also of all animals and plants as well. In plants and all such simple organisms the Vital Principle is of a lower degree of vitality. Aristotle was not sure whether this Soul experiences self-activity or is moved by some outside force, but if the latter be true the operation of the outside influence is possible only through the sensations as a medium. So we find his

³ Aristotle, Lewes, p. 231.

 $\psi \nu \chi \dot{\eta}$, "the breath of life," as a "primary reality," to be not only dynamic but also spiritual.

STOICS

Even in the Stoics a spiritual strain is seen running through their idea of the real. In matter we find Spirit; in the world, God. In fact the world and God seem to constitute something of an identity, God being a vital element pervading all things, the very Soul of the world. God, however, is not made to be so general as to rule out his individual consciousness. tween all things enjoying a conscious soul life there is a definite relationship, closer than that which they experience with lower types of creation. The Stoics would not only say that everything outside of God is his body but that all these things came from his own self and thither will return again. God being a soul, then everything can be traced in its origin to a soul life, and must partake somewhat of the qualities of the great Spirit.

DESCARTES

With Descartes the fundamental principle is conscious thought. He seems to have brushed all else aside as uncertain and gave to philosophy a new starting point. He would say we cannot build our system of philosophy on things external which we do not know. Only those things "which are clearly and dis-

think, therefore I am. 'The fact that I think establishes the thinker as a certainty. Even in doubting we have evidence of a thinking doubter. We can doubt everything else but not the doubter, of which we are certainly conscious. Thus consciousness becomes the criterion of knowledge, and the thinking, psychical being is the only certain, and the most real, thing in all the world. Thus according to Descartes the successful search for real values, ultimate reality, leads into the field of psychical interpretation.

KANT

At first, Kant's philosophy seems to be a system of mere phenomena. We begin with the presupposition that the real things of the world are those which are objects of sense. We find then that these are phenomena only. It is soon seen, however, that Kant is not willing to stop here. Since the mind is not satisfied with less than a complete whole and since knowledge does not give this to us, we are compelled to base our hopes on an investigation of moral consciousness. In this search Kant is led to feel sure that back of phenomena there is a world of ultimate reality and his investigation into the nature and limits of knowledge shows to him the possibility of a noumenal self which is free and untrammeled. He calls this the "thing in itself" (Ding an sich), that something which is left after everything with which the senses and knowledge have to do is brushed aside. Although it can be interpreted only by a divine intelligence we know there

is a "thing in itself" because there must be an objective something which causes our sensations. The fact that we may not understand noumenal things does not at all exclude the possibility of their existence.

What is this noumenal something, this "thing in itself" which lies beyond the world of sense and knowledge? Is it the "I think" which as "an act of spontaneity, cannot possibly be due to sense," 4 and "which because of its spontaneous activity, is the only thing to which we may possibly attribute noumenal reality"? 4 Is it the will which with Kant is the only absolutely good thing in the world and which is good because it wills to be good? These two, the "I think" and the will are identical, for to both he attributes the qualities of complete noumena. "This spontaneous activity, the 'I think' of the Critique of Pure Reason is nothing else than the autonomous will (final reality) Metaphysic of Morality and the Critiques." 5 And it is in the doctrine of the primacy of the will we meet the real Kant; with him the will stands for absolute values. Thus with Kant the realm of real things reaches beyond the world of material phenomena, into the richer world of psychical relationships.

BERGSON

We now come to Bergson and find him teaching a system of philosophy which offers genuine support to a spiritualistic program. In the first Part it was found

⁴ Watson's Selections from Kant, p. 65. ⁵ Schreiber, Kant's Theory of the Primacy of the Will, p. 28.

that Bergson introduced into his conception of reality a dynamic element which he called the *vital impetus*. At that time we were satisfied with the discovery of this single fact, but now we want to get his idea of this vitalistic quality which is so fundamental to life. So from a qualitative standpoint we shall probe deeper into his philosophy of reality to see if it is not of a psychical order.

In his *Creative Evolution* is met the belief that every moment brings something new into existence. "Reality appears as a ceaseless up-springing of something new, which has no sooner arisen to make the present than it has already fallen back into the past." ⁶ Life is one continuous process of Becoming; it "is a tendency, and the essence of a tendency is to develop in the form of a sheaf, creating by its very growth, divergent directions among which its impetus is divided." ⁷

Fundamental in this process of development is the original impetus of life which passes from one generation of germs to another. This is the inner directing principle, the ultimately real factor that drives all things to an activity and not only carries life but is the essence of all life. This vital principle takes matter and shapes it. "Life had to enter thus into the habits of inert matter in order to draw it little by little, magnetized, as it were, to another track. The animate forms that first appeared were therefore of extreme simplicity. They were probably tiny masses of scarcely differentiated protoplasm, outwardly resembling the

⁶ Creative Evolution, p. 47. ⁷ Ibid., p. 99.

amœba observable to-day, but possessed of the tremendous internal push that was to raise them even to the highest forms of life. That in virtue of this push the first organisms sought to grow as much as possible, seems likely." ⁸ But the matter with which the original impetus has to work is not a hard, cold substance. Characterized by a "tendency," an ascending movement, matter finds itself susceptible to the guiding, shaping influence of the vital impetus.

In trying to find an image that will give us an idea of this impetus Bergson has to leave the physical world and go to the psychical. Consciousness becomes for him the motive principle in all development. He says that "if our analysis is correct, it is consciousness, or rather supra-consciousness, that is at the origin of life." 9 Consciousness then, which is real life, is the representation of that vital principle which pervades all things. We are told that there is a consciousness slumbering in instinct, which if finding expression through knowledge instead of action would reveal to us the deepest secrets of life. In his Creative Evolution we hear him say that "real duration is to be found in the realm of life and consciousness" and in his Introduction to Metaphysics he says that "real duration is of a psychical nature." Thus we are not surprised to hear him say that "in reality, life is of the psychological order, and it is of the essence of the psychical to enfold a confused plurality of interpenetrating forms." In summing up it can be said that "he sees as the mystic sees, that the Élan Vital is the energy of one Being which makes matter its means of

⁸ Ibid., p. 99.

manifestation, its vehicle, its tool. He sees that the process of Becoming is a spiritual process of ascension." 10

Corroboration of this interpretation of Bergson is found in the Preface to Carr's translation of Mind-Energy. After saying that Bergson went over the material very carefully with him in order to give the translation the same authority as the original French, Carr then says that "the separate articles here collected and selected . . . are chosen by M. Bergson with the view of illustrating his concept that reality is fundamentally a spiritual activity." ¹¹

EUCKEN AND ROYCE

In Eucken and Royce we have two men who have strongly represented a philosophy of spiritualism, both of whose systems have a distinctly religious bent. Royce is convinced that true reality is spiritual in its nature and that the ultimate ground of things is an eternal, divine world-order. "From the constant interaction of minds he infers the existence of an eternal, divine being which is spiritual and eternal." Royce thinks "we have no right whatever to speak of really unconscious Nature, but only of uncommunicative Nature," and when we deal with Nature we "deal with a vast realm of finite consciousness of which our own is at once a part and an example." ¹⁸

¹⁰ Sinclair, Defense of Idealism, p. 288. (Italics are mine.)

¹¹ Carr, Preface to Bergson's Mind-Energy, p. v. (Italics are mine.)

¹² Jerusalem, Introduction to Philosophy, pp. 150-151.
13 Royce, The World and the Individual, pp. 225-226.

Eucken looks within the thinking creature for the source of reality. "It is impossible to hide from ourselves that Nature, as we see it, does not come to us from the outside as a ready-made fact, but that it starts from our own thinking, and under the influence of our intellectual organization, takes on the shape in which it lies before us." ¹⁴ He teaches a monism which is really an important process, deeper than and fundamental to both materialism and spiritualism. lifts his philosophy into the realm of life itself and life becomes "a transformation of reality into a whole endowed with soul." This resultant, vital process becomes the goal and reality of life, because in itself complete satisfaction and fullness are realized. In this real activity the revivifying, guiding, controlling element is the spiritual which enjoys perfection and completeness only as it masters matter.

So in all the systems which we have reviewed, the search for truth about reality takes us past things material and points with strong emphasis to the realm of the spiritual. And that something which Plato calls ideas, Leibnitz monads, Schopenhauer will, Bergson the vital impetus, and which we are calling energy is to be interpreted as a spiritual force.

¹⁴ Eucken, The Life of the Spirit, p. 188. (Translation by Pogson.)

CHAPTER III

THE SPIRITUAL INTERPRETATION— CONCLUDED

Since we have found that all physical reality is energy, and then further set forth the hypothesis that the ultimate quality of energy is psychical, we would seem to be in position to interpret the well-known facts regarding the influence of the mind upon the body in a new and seemingly satisfactory way—making the mind and body to be parts of one vast system of psychical energy. Hitherto this whole problem has perplexed thinkers from Descartes to the present, and as yet the effect of the mind upon the body has not been consistently explained. A' thorough-going dualism, even though it has been resuscitated by McDougall, is repugnant to the law of continuity, which evolution has so greatly strengthened.

After finding spiritualism able to make a definite contribution toward a better understanding of such significant problems as creation, vitalism, teleology, and evolution; and finding in the history of thought such strong support for the spiritualistic interpretation, it probably would be in order at this place in our program of showing that energy is spiritual, to introduce as a genuine presupposition a psychic element active in all Nature. It may be, however, that the materialist would still challenge our right to this assump-

¹ McDougall, Body and Mind.

tion, saying that our source of explanation is not sufficiently criticized. Then we might reply by placing the burden of proof with the individual of this attitude and assign to him the more difficult task of showing why, if all Nature is not endowed with a psychic quality, it acts so much like it; why it seems that

"Every clod feels a stir of might, An instinct within that reaches and towers; And groping blindly above it for light, Climbs to a soul in grass and flowers."

But this method of procedure would get us no place in particular. So before drawing conclusions we shall need to look at our problem a little further.

Our work here in dealing with the qualitative aspects of energy, which we are calling reality, cannot be taken into the laboratory and handled as an ordinary scientific problem. We must search for facts in systems of thought and test these beliefs by their practical consequences, judging not by laws, customs, or principles but by fruits. We have already done this in a general way in the case of such facts as creation, vitalism, teleology, and evolution.

In this chapter it will be our plan first to examine the relationship between mind and body. From this investigation it will seem probably true that the mind is the ultimately guiding, determining, and original factor figuring in these relationships. While there may be evidence denying the priority of mind this excursus will at least make it impossible, seemingly, to doubt the existence of a psychical element. Then later we shall apply the attitude of representative modern

thought to our hypothesis, trying further to show that psychical energy is a fact, that it is universal and the only reality, and finally suggest a theory of reality on the basis of organized units of psychical energy. If ancient and modern thought, consciously or unconsciously, declares itself in favor of our hypothesis it is because the belief in psychical reality has stood the test; and if the converging lines of testimony in its favor are sufficient, then it should be regarded as true.

THE MIND-BODY PROBLEM

It is very clear that science is not willing to stop with the well-established hypothesis which says, no psychosis without a neurosis. Thus we want to go beneath this, if possible, and get a clew concerning this relationship between the mind and body. In the first place we shall introduce the part which will plays in determining the issues of the bodily functions. As we proceed it is seen that in a large measure Kant was right in believing we can do what we will to do.

The field is large from which could be culled facts having to do with the power of the will over the body, but from a multiplicity of experiences we mention simply the case of an individual who is severely ill, life being in the very balance. By sheer determination to live, sufficient vitality is thrown on the side of life, and will becomes the determining factor, cheating death of its victim. A leading physician at one of the large camps during the influenza epidemic declared that the large number of deaths was due to the fact that the

men being away from home, many for the first time, and being afraid, "gave up" instead of exercising a will power to live.

It is remarkable what influence the attention has been found to have on sensations. When setting ourselves to the task it is possible to think into being a large variety of sensation experiences. For instance, when the attention is concentrated on the hand we can feel sensations glide from warm to cold, numbness, pins and needles, etc., just as the mind dictates. remembering the sensation associated with eating an unpeeled peach, the teeth are set on edge just the same as in the actual experience. Some would dismiss all this by saying that it is subjective, just imagination, but facts encourage us to believe with Tuke that "there is a real effect produced upon the finger if thought is sufficiently long directed to it, and that these vascular changes are felt in the form of throbbing, weight, etc." 2

Science sees also a direct relationship between the emotions and the secretive processes. It has been found that glands will often secrete freely when there is no immediate cause other than some irregular mental activity, like imagination. It has been noticed that the mammary glands of a nursing mother will often secrete milk when she thinks of feeding the child. Also it is a well-known fact that mental strain will cause the hair to turn gray in a very short time.

It naturally follows that the emotions are being closely associated with the work of the digestive ap-

² Tuke, Influence of the Mind upon the Body, p. 57.

paratus, as they assist or retard the necessary secretions. The emotions cannot only paralyze the activities of the stomach but have a direct influence on the entire Alimentary Canal. This is the reason why children should not be fed after being punished or experiencing excitement of any kind. Perhaps the secretions of the salivary glands are most noticeably affected by the emotions. And just as the mouth becomes dry or saliva flows freely according to the emotion experienced, we get a good idea of how the other secretions, such as gastric and pancreatic juices and bile, are influenced by these psychic states. It is not strange then that indigestion in many cases has been traced in its origin to psychic irregularities.

Cannon tells about some very interesting experiments performed on dogs by Pawlow, showing the direct and immediate influence of psychic states on the secretions.3 In the dog's stomach a side pouch was made, wholly apart from the main cavity where the food entered the stomach. This part which was under observation was representative of the entire stomach. In some cases during this experiment an opening was made in the esophagus so that the food being chewed and swallowed would pass out through the opening and not reach the stomach at all. This was called "sham feeding." In this way all the pleasure of eating was experienced without the food getting any further than the esophagus. It was found that about five minutes after the dogs enjoyed the food and went through the process of swallowing, the gastric juice began to flow

³ Cannon, Bodily Changes in Pain, Hunger, Fear, and Rage, p. 4 ff.

from the pouch in the stomach. This continued as long as the dogs ate food and for a short time after the meal was eaten. One very interesting thing observed was that while pleasure encouraged the flow of gastric juice, anger or fright had the opposite effect, which confirms our statement made above, that certain emotions can check secretions and thus interfere with the digestion of food. Cannon says that "since the flow occurred only when the dogs had an appetite, and the material presented to them was agreeable, the conclusion was justified that this was a true psychic secretion." 4

The emotions have been found to affect the heart also. It will beat faster as it contracts irregularly, if the individual is frightened. Dying of a "broken heart" as the result of worry and sadness is no mere figure of speech. On the other hand the heart often has been too severely strained by the sudden announcement of good news, resulting in death in many cases.

Mental strain has its definite effects on the liver and kidneys. One scientist says that a depressed mind, if of a sufficient duration of time, will actually change the structure of the liver. In the Medical Times and Gazette is published the findings of Dr. Byasson in a test made of the renal secretion passed under conditions of normal quiet and cerebral activity. The summary is as follows:5

(1) "The exercise of thought was followed by an increase in the amount of urine."

⁴ *Ibid.*, pp. 5-6. ⁵ Quoted from Tuke, p. 135.

- (2) "The amount of urea was augmented in a marked manner, there being about a drachm more on the day of cerebral work than on that of repose."
- (3) "A slight but uniform increase in the amount of phosphates and sulphates during mental activity."
- (4) "The density, acidity, the uric acid, lime, magnesia and potash were scarcely affected. Chlorine was less in amount."

Dr. Byasson states that by a single analysis of the urine he is able to tell whether the individual has spent the day in repose or mental activity, the diet and environment being the same for the three days of test.⁶

In the category of facts which show the controlling influence of the psychic states over the body there is none more significant than the way emotional experiences affect the activities of the blood. "Hemorrhage is often increased by attention, but whether by excitement to the heart's action or by direct influence on the vessels of the part cannot easily be decided." The fact, however concerns us here more than the method. It seems that concentration of thought can send blood to the place supposed to be affected. The stigmata of St. Francis of Assisi has a place in this discussion. Some may want to rule out this experience because it seems to be so irregular and mysterious. But until history can deny the fact it will stand as a remarkable illustration of the influence of the mind upon the body.

Another case of stigmata mentioned by Tuke is that of Louise Lateau. When M. Charbonnier presented an article to the Royal Academy of Medicine of Belgium, reviewing the case of Louise, this organization

⁶ Quoted from Tuke, p. 135.

appointed a Commission to examine her before they would accept the article for publication. This Commission was to see if blood really did ooze from her side, feet, hands, and forehead. The examination was made while she was going through the experience and the blood was flowing from her body. We cannot review the case in detail here but simply state that the conclusion reached by the Commission was that "the stigmata and ecstasies are real. They can be explained physiologically." In the light of such facts as these it is not hard to believe that in the agony of Gethsemane Jesus sweat drops of blood.

One of the most specific effects of emotional experience on the blood is to be observed in the adrenal glands pouring their secretions into the blood circulation as the result of psychic excitation. Cannon and D. de la Paz have performed experiments in their laboratories clearly demonstrating this fact. The animal used was a cat. The method used for frightening the cat was a barking dog which was allowed to enjoy himself at a safe distance while the cat was securely By a very careful operation fastened in a holder. blood was secured from near the adrenal glands before and after the fright of the cat and labeled "quiet blood" and "excited blood." In the "excited blood" was found a much larger amount of adrenalin. It was also observed that the secretion of the adrenal glands increased with emotions. Then the glands were removed with the result that the blood was not then affected with adrenalin.

The fact that during these psychic experiences the 7 Ibid., p. 119.

adrenal glands shoot adrenalin into the blood is not the whole lesson to be learned by any means. Cannon would not feel that this is the "end" attained but simply the "means." We learn from him that injecting adrenalin into the blood causes the liver to liberate sugar into the blood; helps in a faster coagulation; drives blood from abdominal viscera into heart, lungs, central nervous system, and limbs; acts as an antidote for muscular fatigue. So it seems from this and other facts which have been set forth that psychic activities touch in a concrete way the very last iota of being in the body. In other words, psychical energy seems to be a genuine fact, constituting the ultimately guiding and determining factor in all human experiences.

PSYCHICAL ENERGY AND MODERN THOUGHT

Perhaps from the foregoing it would seem reasonable to believe that the ultimate quality of reality is psychical or spiritual. But let us look at this problem a little further, and, studying it in the light of recent movements of thought, see if corroboration of our hypothesis can be obtained.

DE TUNZELMANN

According to de Tunzelmann this hypothesis is the only alternative. "Schemes have been propounded with a view of accounting for the established order of Nature without the assumption of a primal intelligence... no scheme of the kind has ever been presented

which would appear even superficially plausible to any but untrained minds. . . . In the present state of scientific knowledge we are justified in maintaining that the possibility of such a scheme is unthinkable. . . . I propose to introduce the concept of an all-pervading universal mind or omnipresent intelligence forming an entity even more fundamental than the all-pervading ether." 8

BERGSON

In Bergson's philosophy there is a graded intelligence which reaches below the animal kingdom. This reminds us somewhat of Leibnitz' "confused perception" which is met in the lowest type of being. Bergson says: "The more the nervous system develops . . . the clearer is the consciousness . . . the lower we descend in the animal series the more the nervous centers are simplified, till finally the nervous elements disappear, merged in the mass of a less differentiated organism. But it is the same with all the other apparatus, with all the other anatomical elements; and it would be as absurd to refuse consciousness to an animal because it has no brain as to declare it incapable of nourishing itself because it has no stomach. . . . This amounts to saying that the humblest organism is conscious in proportion to its power to move freely. We should define the animal by sensibility and awakened consciousness, the vegetable by consciousness asleep and insensibility." 9 This together with the more elaborate

⁸ de Tunzelmann, The Electrical Theory and Problem of the Universe, p. 454.

⁹ Creative Evolution, pp. 110-112.

treatment of Bergson's philosophy in the chapter on the history of thought leaves no uncertainty as to his belief in psychical being.

PRAGMATISM

A similar attitude is met in modern pragmatism. In this philosophical system "creative intelligence" is championed—a pragmatic theory of intelligence. It is an intelligence that "frees action from an instrumental character," that "frees experience from routine and caprice"; an intelligence that liberates and liberalizes action; an intelligence that is "inherently forward looking," which can forecast future possibilities and can help toward the good. "A pragmatic intelligence is a creative intelligence, not a routine mechanic." ¹⁰ In this system the problem of reality is not important and hence there is no attempted explanation of this creative, evolutionary power. But since it has the faculty of discerning the future and distinguishing between the desirable and undesirable it must be interpreted as having a psychical, spiritual nature. ¹¹

PERRY

In Perry, an able member of the new realistic group, there is evidence of a belief in the presence of psychical reality. He says that "as a potentiality without assignable limits it (matter) may be reasonably endowed

¹⁰ Dewey, Creative Intelligence, pp. 63-66.

¹¹ Compare Lovejoy's Article, Journal of Philosophy, Vol. 17
(1920), pp. 622-632.

with intellectual force as with physical force." ¹² Then again, he says, "If it is impossible to construe the world in terms of thought or in terms of moral life, there yet remains a further conception, complete enough to embrace these and every other possible value—the conception of a universal spiritual life (geistiges Leben) that shall be infinitely various and infinitely rich." ¹³ It is not our purpose here to attempt any interpretation. These statements are simply taken at their face value.

THE IDEALISTS

What need be said concerning the presence of a spiritual reality in the recent systems of philosophy represented by Bowne, Royce, Ward, Richardson, Aliotta, Howison, etc.? To take away belief in a spiritual agency would be taking the heart out of these philosophies. And would it not be difficult to find a modern system of thought in which psychical reality does not loom up, consciously or unconsciously, as a significant fact?

Here we have proposed to us all kinds of panpsychisms, pantheisms, pancalisms, etc., and hence all the phenomenalistic theories of matter. A psychic quality in all Nature, however, can hardly be said to be complete panpsychism. These theories simply represent a psychical principle running through all things. Ever and anon we meet such beliefs which are looked upon

¹² Perry, Present Philosophical Tendencies, p. 69. ¹³ Ibid., p. 153.

as panpsychic. In them there is usually the tendency to interpret body as phenomenal, thus involving us in a epistemological discussion which need not becloud the issue. Etymologically speaking, panpsychism is that theory which ascribes a psychical nature to the whole of being, and should be equivalent to spiritualistic monism. And in our endeavor to show, from the standpoint of scientific attitude, that there is a psychical energy in all Nature, it is imperative that we keep in mind that this is not our ultimate objective; although dealt with in detail it is but a sub-station along the way. As we proceed it will be seen that we are advocating that genuine panpsychism which says that all reality is psychical or spiritual.

THE UNIVERSALITY OF PSYCHICAL REALITY

The criticism may possibly be made here that the converging lines of testimony which have been offered in this chapter and elsewhere to show the presence of a psychical, spiritual reality, have to do primarily with the higher forms of being in the organic world. But it is the belief of many students that the law of analogy can be brought into play in this case, and what is true of life in the organic world will hold good for all forms of being; and as the so-called physical has been found to be, seemingly, a medium through which the psychical finds expression, it is reasonable to believe that this principle prevails in all Nature, holding good even throughout the inorganic world.

The attitude represented in the preceding paragraph has the strong backing of science. The law of con-

tinuity pertains not only to certain types but reaches from the lowest to the highest forms of being, and no one can safely attempt to annul this law by postulating a line of demarcation between the inorganic and the organic worlds.

Clifford is very definite in his support of this attitude. He says that "as we go back along the line, the complexity of the organism and its nerve-action insensibly diminishes; and for the first part of our course we see reason to think that the complexity of consciousness insensibly diminishes also. But if we make a jump, say to the tunicate molluscs, we see no reason there to infer the existence of consciousness at all. Yet not only is it impossible to point out a place where any sudden break takes place, but it is contrary to all the natural training of our minds to suppose a breach of continuity so great. . . . But as the line of ascent is unbroken, and must end at last in inorganic matter, we have no choice but to admit that every motion of matter is simultaneous with some ejective fact or event which might be part of a consciousness." 14

De Tunzelmann also would give a place to the psychical element not only in animal life but in all Nature as well. He says "there is no way of evading the conclusion that a determining cause must be sought for beyond the molecular scheme. There is one and only one such course known to us—our own will or mind; and the fundamental principles of scientific investigation lead us therefore to seek in the extension of mind for the determination of the molecular scheme, and further, of the whole order of Nature. We find

¹⁴ Clifford, Lectures and Essays, pp. 283-284.

that the mental scheme, introduced simply as a working hypothesis, proves satisfactory at every point where the molecular scheme is found to be insufficient, and the attempt to ignore it in the development of any scheme attempting to account for the order of Nature, will invariably be found to necessitate its introduction in some disguised and unscientific manner, which very commonly takes the form of personifying natural law, one of the worst of pseudo-scientific absurdities." 15

Royce very earnestly argues against setting the lower types of being off to themselves and denying to them psychical activities. He says the doctrine of evolution helps to bridge the gulf between the two extremes in Nature—mind and matter. "Between what seems to us, from our ordinary social point of view the highest of accessible mental life, and what we take to be the manifestations of lifeless matter, there is, in the process of mental evolution apparently no breach of continuity anywhere. . . . It is precisely this apparent continuity which is the most impressive of all the inductions that the study of evolution has lately forced upon the attention of all who have taken Nature at all seriously." 16 "When we see inorganic Nature seemingly dead, there is, in fact, conscious life just as surely as there is any Being present in Nature at all." 17

The same elements are represented in minerals, plants, and animals; they are simply organized differently. Minerals get their subsistence by feeding on materials about them in just as real a sense as the

¹⁵ de Tunzelmann, p. 461. 16 Royce, The World and the Individual, Vol. I, p. 210. 17 Ibid., p. 240.

highest developed forms of life, only the method is more crude. There is a general process of feeding going all the time. It is a very fundamental fact in agriculture that the soil gets its nourishment from plants, animals, etc. Plants depend for nourishment on the air, moisture, and soil. Animals in turn feed on plants and other animals. Most plants, however, "feed at a lower chemical level than do animals." "It has been recognized that the beech-tree feeds and grows, digests and breathes, as really as does the squirrel on its branches: that in regard to none of the mainfunctions (except excretion, which plants have little of) is there any essential difference." 18

In science illustrations of analogy are not wanting which show that the same deep principles which prevail in the organic world are found in the inorganic as well. We see this analogy in the fact that if a block of any one of the thousand minerals known to science, quartz for instance, were broken into myriads of pieces, every particle would be found to be a perfect crystal, just the same as the original, which suggests a similarity to the fact that if a starfish were torn into shreds, every piece would regenerate itself and form a starfish again. If we were to take this same piece of quartz and put it into running water it would become sand-grains. If then these sand-grains were put in the proper environment where they would have access to food, they would regenerate themselves and go back to crystal forms.

Science discusses this whole question as the tendency of all things, inorganic as well as organic, to adjust

¹⁸ Thomson and Geddes, Evolution, p. 78.

themselves to their environment, the only difference between the two being that the inorganic is slower than the organic in this respect. In concluding a lecture on evolution in general and life in particular Kay says "there is then a continuity in the development of the earth, and the inorganic world is just as wonderful as the organic." If scientific thinkers of this attitude are correct, and we have no reasons to disbelieve their findings, then even in the inorganic world there is met teleology, and immanent teleology is difficult to conceive apart from a psychical activity.

So it is evident that in science and philosophy there is strong opposition to the idea of separating the inorganic from the organic world; it is just like trying to divide the bud from the blossom. If evolution is right in teaching that higher forms come from the lower, that the organic has evolved from the inorganic level, then the inorganic world has always held wrapped up within itself the potentialities of higher developed life, and even to-day must have in itself possibilities yet to be unfolded. The only difference between the two is that in the organic we have a higher development or organization of energy units. Thus it seems reasonable to believe that what holds good for the organic world holds good for every form of being; if psychical energy is dominant in one type, it is dominant in all.

PSYCHICAL ENERGY AS THE ONLY REALITY

The dualist, however, might suggest the possibility of spirit being the directing element and matter the thing directed, without making spirit the only reality. But the materialist and dualist, in clinging to matter as a final reality will have a difficult task in endeavoring to harmonize their philosophy with the modern belief in the energy concept, for the conception of matter as a static, fixed substance will not stand in the face of progress made by science in recent times. Modern thought points the other way. "It is the discovery of living processes of incessant adjustment and adaptation, rather than of sequences purely mathematical and mechanical, which has in recent years been the source of philosophical reaction." ¹⁹ This attitude is endorsed by Woodbridge, who says "this is the one and significant thing in modern philosvaluable ophy." 20

So the question arises at this time as to what that something is, which has been designated as physical or material and which seems to be the means by which the psychical achieves its ends. As the psychical is understood to unfold itself in every part of the organism, it makes us wonder whether the old hypothesis of mind and matter is not wrong after all. The relationship between mind and body seems too smooth, too perfect for two different entities to be rubbing up against each other. Facts point to the existence of a single substance.

In Part I we showed the strong monistic tendency of scientific thought, culminating in the belief that reality is energy. Science to-day is inclined toward a monism, a monism of energy. It has been found that

¹⁹ Adams, Idealism and the Modern Age, p. 98.
²⁰ Woodbridge, Journal of Philosophy, Psychology and Scientific Methods, Vol. XIV, p. 378.

in the last analysis of things we come face to face with the electrons which are but charges of electricity, a form of energy. No such distinction is made as psychical and physical energy. All the electrons are the same, no matter where found. The atoms differ only in the groupings of electrons constituting them.

If monism is correct, then, it would hardly be possible for everything to be material because modern thought, as has been shown in detail, believes in the presence and priority of psychical activities, of spirit. On the basis of a monism of energy it is perhaps reasonable to doubt whether there is such a thing as physical energy. In other words, we come to that place where it is fair to question the existence of genuine matter. But on the other hand it would seem inconsistent to question the reality of psychical energy; we have found facts pointing to a psychical energy at work and should feel kindly disposed toward a belief in its reality. We are therefore inclined to believe with Huxley that "Matter and Force are, as far as we know, mere names for certain forms of consciousness." "We find ourselves forced to interpret Nature . . . as an orderly realm of genuine conscious life, one of whose products, expressions and examples we find in the mind of man." 21 This is equivalent to saying that the same thing which has been called body or matter and through which mind seems to find expression is also of a psychical nature. These things being true, it is in a spiritualistic monism then that Nature seemingly finds its correct classification.

²¹ Royce, World and Individual, p. 242.

ORGANIZED PSYCHICAL ENERGY AS A THEORY OF REALITY

Facts indicate that Leibnitz was working on the right principle. He resolves everything into monads, centers of psychical, spiritual force. In the very lowest types of being we find a group of monads clustering about a governing or central monad. This group with other groups gather about a still more important central soul; and so on until we come to the highest type of being as found in mind and represented by consciousness. The monads surrounding the central monads or souls are continually changing but the governing souls never change. Here we have a world alive with thought, ranging from the lowest, confused perception, up to mind as consciousness.

The further we go into the study of reality the more it seems that it is a program something like that of Leibnitz which will stand the test of time. Science finds that there are central cells something like those to which Leibnitz refers. "There is a popular fallacy in lay minds that the whole human body is replaced by fresh material in a period which by some whimsical fancy has been fixed at seven years. As a matter of fact some cells are formed, pass to maturity, and perish almost daily, while others last as long as the animal itself. . . These master cells are to be found in the brain and other parts of the central nervous system, in arterial walls, and in mechanisms which control the heart." ²² Starbuck says "the parts in the finer anatomy which are especially essen-

²² Moore, The Origin and Nature of Life, p. 45.

tial to mental activity are the cells for generating and storing nervous energy, and a rich network of nerve fibers with fatty wrappings for conducting the energy from one part of the brain to another." ²³

Hence we are led to a new conception of the human body, seeing it as an intricate organization of psychical energy, in which can be found many minor groupings or systems of more or less importance. Probably in the lower organisms of the body we could find energy units of the simplest organization gathering about the most inferior cells, and in coming up through the more complex systems connected with the more important cells, finally find the whole system culminating in the cells having to do with the brain.

This is not unlike Hughlings Jackson's theory of "levels" or Flechsig's "associated centers." With Jackson the lowest level heads up in the spinal cord, medulla and pons and has to do with the simplest activities of the body. The second level represents a higher organization of relationships; and the third, the highest, is supreme in heading up the entire nervous system and represents mind.

We have shown that science believes that the same principle of psychical activity is fundamental to all being, animate and inanimate; to all bodies, organic and inorganic. It seems reasonable then to accept that system which sees in all Nature a vast organization of psychical units of energy, which amounts to saying that energy operates as a spiritual force. According to this conception we meet in the lowest types of being the most inferior organizations of energy units, the units of every single body clustering about a governing

²³ Starbuck, The Psychology of Religion, pp. 149-150.

nucleus or cell. And as we come up through the series we meet the more complex groupings of energy units until finally in the consciousness of mind is met the highest degree of organization in all Nature.

Having come thus far, it would seem consistent in this hypothesis to take another step and suggest a great Mind or Spirit, in which is realized absolute consciousness, dominating the world of spiritual energy. This being accepted, we should have a common meeting ground for scientific thought and those religious beliefs which represent the deeper intimations of humanity, even though science should see it as an over-belief and theology should interpret it as a fact of experience. Here then the religious devotee would be led to speak in terms of energetic Spirit instead of an absentee God, and the scientist in terms of spiritual energy rather than materialism and mechanism.

It is further possible in this program of evolving spiritual energy for the adherent of the Christian faith to believe it was at that place where in the process of development from the "dust of the earth" man came into consciousness, that the great Spirit began to deal with man as a person and that Biblical literature begins its history of the human race; that it was when man stepped forth a conscious being he became a living soul, made in the image of God. In this vast system then the mind of man stands above all organizations of spiritual forces, crowning the network of Nature's activities. This most highly organized system of spiritual energy as represented in human consciousness is probably the only organization of spirit which knows no dissolution, making possible for man the experience of immortality.



PART III: ENERGY AS AN ATTRACTIVE FORCE



CHAPTER I

THE ATTRACTIVE PRINCIPLE

In the foregoing Parts of this work the purpose has been to show that reality is energy and that this energy is of a spiritual nature. Having reached that position in our search for the real where the concept of energy seems to hold a place of supremacy in relation to other fundamental concepts, we are now interested in an inquiry concerning the relationship between units of energy. While it may seem that our objective has been reached in the study made of the energy concept in its qualitative aspects, concluding that energy is spiritual, this inquiry is so closely related to our problem, that our task would hardly seem completed unless we tried to meet the challenge of this question—How do units of energy operate in relation to each other?

In observing the activities of the universe we are made to wonder whether the evidences of a dynamic energy at work are determined by a principle of attraction or propulsion. The question coming up at this time shapes itself something like this: In the whole realm of Nature's life is the actuating principle, fundamental to all activity, to be characterized as one of "push" or "pull"?

We come immediately to the point in suggesting that the hypothesis which seems to harmonize best with facts is that which says that spiritual energy or reality works in an attractive way; and that inherent in all being is the principle of attraction which holds together all the elements entering into the make-up of Nature, thus being responsible for the balanced organization of the world of reality. While it has been popular to look upon God as the efficient cause, imparting force to his created objects, in addition to this it is easy to believe that the attractive element of his own self has been imparted to those things outside himself and which attractive element operates as a vital principle in all life. Aristotle supports this in his philosophy, teaching that this attractive principle plays a great part in the relationship existing between the Creator and things created.¹

Empedocles taught the existence of an attractive force which he called Love. According to him this principle operates not only in man but in all the world as well, being an integral part of the very life of all things. He makes this responsible for holding together the many forms of matter. Over against Love he places Strife, picturing the four elements, earth, air, fire, and water to be thoroughly mingled with Love, Strife being on the outside. As Strife enters and begins to work on the elements, Love moves toward the center of the sphere; and when Strife has done its utmost and Love has reached the very center, then Love begins to expand and Strife moves outward. This attractive principle, Love, is central in his whole system of philosophy.

Heracleitus also placed the principle of attraction

¹ Hicks, Stoic and Epicurean, p. 19.

deep in his scheme of reality. Offering an illustration of Heracleitus' attitude in trying to account for the eternal change according to law, Ernst Laas "compares it to the actual paths of our planets, which move neither in circles nor in exact ellipses, but, under the influence of the attractive forces of moons and of other planets, or of comets, continually change both their course and their velocity, and yet all according to law." We find that Anaxagoras and Empedocles believed that even plants were set in motion by desire. This is equivalent to saying that there is in the front an attractive element continually pulling, and to which inherent intelligence responds.

This attitude of the ancients has stood the test of the ages and rightly so, for facts do point either to an intelligent, dynamic something in the future "pulling" things from the present, or an intelligent vital principle in the past "pushing" things into the present. This must be so or Nature is the victim of a blind, groping process, and we have elsewhere disclaimed relationship with a willingness to make the activities of life depend upon the laws of a dead mechanism. We are interested here in trying to learn whether it is the "pull" of the future or the "push" of the past which figures in the onward sweep of things.

It is granted that the past holds for us more than memories. From its experiences myriads of rivulets come gushing into the stream of the present as it rushes on to the future. And yet no normal person or thing lives in the past. We look forward not backward. Bergson believes that "leaning and bending forward is

² Patrick's Heracleitus, p. 63.

the characteristic attitude of the conscious being." 3 thousand lessons may be learned from yesterday but their value is realized not in looking back but ahead. The seeming urge of the past becomes swallowed up in the mighty pull of the future. "Once and always desire is ahead beckoning on from instant to instant. It is as a voice crying out forever from the bosom of the flying hours. It is the call of the time to come. It is the tug from before, not a thrust from behind; it is the pull of the future, not the push of the past" 4 which is the determinant in all experiences. It makes but little difference what name is given to this attractive, dynamic force with which all Nature seems to be instinct. It goes without saying, however, that there is no one term broad enough to represent in a perfectly satisfactory way the vast and intricate workings of this attractive principle.

It is not sufficient for us simply to show that there is an attractive process going on all the time. We must satisfy ourselves as to what that fundamental something is which constitutes a common basis of appeal among all agencies; what that something is to which is attributed responsibility for holding together all Nature, making possible its balanced relationships. In trying to give this "pull" a definite setting, a satisfactory interpretation is found in that philosophy which treats all being as organized on the basis of that principle which in the animal world finds its highest expression in what is known as love.

³ Mind-Energy, p. 9. ⁴ Smith, Monist, Vol. 23, 1913, Jan., p. 31.

In making love a universal, attractive principle, inherent in all being, we are following the lead of Plato.5 According to him there are two types of love-one that is high and noble, rising above all wantonness or lust and inhabiting the "higher nature of man"; the other having to do with the body rather than the soul and having in it the possibility of being vulgar and base.

Human life represents the finest organization of spiritual energy yet developed, and in man is to be found the most finished and refined form of this attractive current which runs through all life. Consequently to man belongs the most delicate experiences in relation to this great principle, love.

In Dante is seen the best picture ever portrayed of a highly organized philosophy of love. Here is revealed love's richest meaning. Dante shows love to be a powerfully attractive force, making it to be the fundamental principle both in heaven and earth. It is the great abiding fact which remains amid fleeting changes. Perfection cannot be where love is not. "The lack of love, then, is the disease of the soul, from which all life's worst evils flow. 6 . . . Love is Creation's final law." 7 It contributes only to the best, lifting all it inhabits to the loftiest heights.

Perhaps this attractive principle could be called desire, since love and desire represent practically the same field. The one cannot be separated from the other. The things loved are always the things desired, and vice versa. Again, the things desired are chiefly

⁵ Plato's Symposium, passim.
⁶ Carpenter, Spiritual Message of Dante, p. 94. 7 *Ibid.*, p. 107.

those which we do not have. So, desiring something signifies a want of something. The object of our love may be in our possession but satisfaction comes only with new experiences. Love turns away from the past and transcends the present. Its objective always lies in the future. No one is ever completely satisfied. There is always something ahead, pulling us on and on, call it ideals, call it what we please.

It seems that life's chief desire is to be. There is a continuous struggle to perpetuate existence. Putting it negatively, there is a desire not to die. The instinct of self-preservation is identical with the desire to be immortal, characteristic not only of man, but of lower forms as well. The latter, not reaching as high degree of organized spirit as man, whose being is represented by human consciousness, fail to come into a realization of their ambition. There is a large group, however, especially in some non-Christian religions, who believe that even animals do continue their identity and teach this belief in the doctrine of metempsychosis, the transmigration of the soul.

The instinct to perpetuate life is responsible for the universal love for children and is also the reason why the weakest will dare to die fighting for their young. It is said they love them, which is true, but the courage of the fight fundamentally hinges on the desire to perpetuate life. Thus in love itself is to be found the occasion of the great Spirit's creative scheme.

Continuing further, the love of life, the desire to perpetuate existence, seems to root itself in the reproductive instinct, this being the instrument through which the instinct of self-preservation realizes its ends, finding temporary satisfaction in generation and birth, both of which signify eternity and immortality. And it is with the reproductive instinct that the sex impulse is always associated. It may be that in the last analysis the two are not only inseparable but also identical.

Plato was unable to avoid the representation of a close relationship between love and the reproductive or sex instinct. In interpreting Plato, Jowett says there is a "mystery of love not only in nature, but in man, extending far beyond the mere immediate relation of the sexes. He is conscious that the highest and noblest things in the world are not easily severed from the sensual desires or even may be regarded as a spiritualized form of them." ⁸ Love then, according to Plato, being a great spirit, ⁹ may be simply a highly organized spiritual form of sensual desires.

Instead of representing here two types of love as found in Plato—one of a higher nature for the soul life; the other of a lower nature for the bodily life—facts seem more consistently organized in that system which makes this lower type of love to be the sex impulse. In this program love and the sex instinct are made to be one and the same fundamental principle, love being the sublimated or finished product and the sex or reproductive instinct the raw material from which love is made. This seems true because it is the same principle which in passion runs to things base or in love finds itself organized in harmony with the loftiest ideals.

Since "God is Love" it may be inferred that our

⁸ Jowett's Introduction to Symposium, p. 459. ⁹ Plato's Symposium, p. 495.

system makes his Love to be a supreme culmination of sexual processes, but such is not the case. Elsewhere in this work God has been shown to be the only Absolute Spirit and as such is far above, figuratively speaking, and altogether free from the entangling experiences peculiar to the lower forms of spiritual energy.

As we proceed the reader is warned against interpreting the sex impulse in a common and popular way which usually associates this instinct with such terms as lust, vice, etc. The idea of two genders, masculine and feminine, must be eliminated. And instead of this we are invited to consider a broad, universal principle through which life continually reaches for immortality, which it naturally loves and toward which it is naturally drawn.

We have represented love as being the finished form of the attractive principle operating in all life. Now we shall try to see the sex instinct not simply as a fundamental factor in life but as the raw material of that attractive principle which dominates in the attractive phase of energy's organized scheme; believing also that satisfaction in the ceaseless onsweep of Nature's activities is attained only as the restless striving of this impulse comes into the realization of its natural ambition, which is to perpetuate existence.

That there is a common, universal reproductive current running through the general stream of energy or reality and that all being is organized on this basis, is finding strong confirmation in the streams of thought running in from many quarters to-day. It is believed by many that around this pivotal factor all the activi-

ties of life play. In the ultimate analysis of all things there is met spiritual energy in which is an attractive sex principle which characterizes the ultimate substratum from which everything is evolved, and which principle continues to inhere in all being in every stage of evolution, reaching the highest degree of refinement in love as experienced by man.

In presenting the sex idea in this connection we are offering a belief which not only harmonizes with much of modern thought but which has an echo in ancient philosophy. The close relationship which Plato saw between this impulse and the noblest things in life has already been suggested. In Bakewell's Source Book in Ancient Philosophy, Secondary Sources, we read that "Anaxagoras, Democritus, and Empedocles say that (plants) have mind and intelligence." ¹⁰ Empedocles, however, did not stop with attributing to mind and intelligence responsibility for the marvelous responses obtained, but "was of the opinion that sex had been mixed with them."

It is believed by many thinkers to-day that the reproductive instinct inheres in all stages of life. The old idea, that there are no sexual manifestations until the initial stages of pubescent growth, must be abandoned. Facts indicate that these fundamental tendencies inhere in the child at birth, and though seemingly suppressed for a time, find clear-cut expression before puberty if occasions open the way for demonstrations.

It should be said in passing that as the boy makes progress in the period of adolescence it is the remark-

¹⁰ P. 48. (Pseudo-Arist. de Plant-815 a 15.)

able wisdom of Nature that with his feeling of ripening experiences he is also naturally backward, consciously clumsy, interested in things rugged, all of which tends to turn him away from too close attention to his possibilities newly awakened and newly perceived.

A study of the reproductive factors and the physiological experiences of the individual clearly demonstrates the fact that the two cannot be successfully separated from each other. This is clearly seen in the growth of the child's body when approaching puberty and during the period of adolescence. In most cases there is a check just before adolescence followed by rapid growth and greatly increased strength. There is at this time a very noticeable growth of the bones and The heart also becomes suddenly larger. muscles. These and similar facts make it very certain that the sex part of life is tied up in a fundamental way to the general physiological organism. Freud says that "he who is in any way psychically abnormal, be it in social or ethical conditions, is . . . regularly so in his sexual life." 11 It may be that the Freudian school has overworked the sex idea but it must be admitted by all that this group has been trying to organize what is proving to be a very basic fact.

In introducing the sex idea we have suggested that our attitude refuses to consider this impulse as a negative force as it is usually interpreted, running into licentiousness. Instead of this we have represented it to be a universal, fundamental principle which in its most finished form is love; also claiming that it is the means

¹¹ Freud, Sexual Theory, p. 13.

by which the desire for immortality, the instinct to perpetuate existence endeavors to reach its goal. stead of the two-gender idea we would go deeper and see a common substratum of sexual energy from which all things are evolved. It is called a sexual energy because its chief characteristic is the reproductive instinct.

Hall would say there is such a living, vital substance which is striving always for self-expression. It is not only a germinant living substance but is a storehouse of experiences, a reservoir. It is this "marvelous substance that spins out filaments, foams, develops granules or films, vibrates, takes on or puts off various forms of organization in its ceaseless Heracleitic becoming." 12

Into this common sexual energy all being roots itself. Sometimes this energy expresses itself as male, sometimes as female, but both with many similar characteristics and tendencies. The line of distinction between the two sexes is not so definite as it seems. The supposedly differentiating factors disappear as we settle into the belief that the "deep constitutional difference between the male and female organism, which makes of the one a sperm-producer and of the other an eggproducer, is due to an initial difference in the balance of chemical changes." 18 It is found that "in the animal and even plant series closely allied series have great variability of sex parts and functions, the same organs sometimes producing alternately eggs and spermatozoa, while lower down we find many creatures

¹² Hall, Adolescence, p. 412. ¹³ Thomson and Geddes, Evolution, p. 90.

that may reproduce either by fission or sexually." 14

The belief that beneath the two sexes there is a fundamental energy charged through and through with a reproductive or sex instinct, derives support also from the current belief that monosexuality has not always prevailed. Way back in the early stages of evolution the tendency was to bisexuality. Freud says "this contains a new contradiction to the popular belief which assumes that a human being is either man or woman. Science shows cases in which the sexual characteristic appears blurred and the sexual distinction is made difficult, especially on an anatomical basis. A certain degree of anatomical hermaphroditism really belongs to the normal. In no normally formed male or female are the traces of the apparatus of the other sex lacking; these either continue functionless as rudimentary organs or they are transformed for the purpose of assuming other functions." 15

In those cases in which the sex fails to declare itself distinctly and the sex characteristics approach a balance, genuine hermaphroditism results. It is perhaps to this tendency toward balanced sex characteristics that we must look for the cause of some women looking "mannish" and some men "womanish." This being true, the terms "sis" and "tomboy" can be more than mere figures of speech.

In endeavoring to represent the reproductive instinct as central in the onward reach of life to be and thus a fundamental element in that current of energy which responds to the pull of the future, it has been

¹⁴ Geigel, quoted from Hall's Adolescence, p. 414. 15 Freud, Sexual Theory, p. 7.

necessary to confine the examination of the hypothesis to the highest forms of life, believing that what holds good for the human family and those species similar to it will hold good for the lower types as well. Hall substantiates this in saying that "we may interpret the vast number of ova and spermatozoa to be a survival in man of the enormous fecundity of lower species." ¹⁶ It is unwise speculation which would set up a line of demarcation where the organic world ends and the inorganic begins. The idea of a sudden break in the series in the descent from the highest types of being to the lowest cannot find justification except as tradition has taught the misconception. ¹⁷

If in human life this attractive element finds its highest point of development in love, it can be called by the same name in all animal life. And so to every type of being as we go down the series, a measure of this attractive love can be ascribed, proportionate to the standard of intelligence experienced by that type of being. If the descent should be made down the entire scale to the most insignificant iota of substance and then that bit of substance analyzed we should come face to face eventually with the atom, and find it held together by the attraction of its negative and positive charges. This is true of every atom, of all substance, of all being. It is true that in the atom is met repulsion of like charges but it seems that the attractive force predominates and constitutes the primary characteristic of the atom.

To say definitely that the attraction inherent in the

¹⁶ Hall, Adolescence, p. 473.
17 It will be remembered by the reader that in Part II we showed such a distinction to be unjustifiable.

atom has a direct relationship with the sex impulse would be reaching beyond known facts, but it is easily possible that further research will reveal facts sufficient to establish the belief that the attractive quality represented in the sex instinct and evident in all being, receives its original impetus and has its fundamental basis in the attractive element characteristic of the relationship existing between the negative and positive charges which make up the atom. Haeckel seems to invest confidence in this belief when saying that "the different relation of the various elements toward each other, which chemistry calls 'affinity' is one of the most important properties of ponderable matter. . . . Every shade of inclination from complete indifference to the fiercest passion is exemplified in the chemical relation of the various elements toward each other, just as we find in the psychology of man, and especially in the life of the sexes. Goethe in his classical romance, Affinities, compared the relations of pairs of lovers with the phenomena of the same name in the formation of chemical combinations. The irresistible passion that draws Edward to the sympathetic Ottilia, or Paris to Helen . . . is the same impetuous movement which unites two atoms of hydrogen to one atom of oxygen for the formation of a molecule of water." 18

Having made energy to be spiritual it is reasonable to believe that the attractive passion which characterizes the higher forms of life is the very same affinity which is found asserting itself in the relationships of the lowest forms of being. All these things lead to the conclusion that the reproductive or sex instinct which

¹⁸ Haeckel, Riddle of the Universe, p. 224.

manifests itself in its most finished form as love is a universal, attractive principle peculiar to all being, and that it is by means of this principle that the balanced relationship of all Nature's activities is maintained.

CHAPTER II

ASCENDING PROGRESS

In the last chapter the belief was championed which says that reality, operating as a balanced system of spiritual energy, is characterized by a principle of attraction and the element fundamental in this program of attraction was made to be the sex or reproductive instinct. In this chapter we are advocating that not only are things constantly attracted to each other but that the activities of the whole universe constitute a movement of ascending progress, occasioned by the fact that the great Spirit, in whom all reality culminates, constantly draws things on and up toward himself. We have already attempted to show that love and desire cause things to move. In addition to that, it is suggested here that God, being the object of love and desire, causes things to move toward himself.

In the first place it is necessary to satisfy ourselves with the idea that ascending progress does characterize the experiences of the world. Spaulding says that "direct empirical evidence compels us to admit that there is a newness, a creation, an ascent in situations." As support for this belief we fall back upon the history of the world as told in the story of evolution. Schiller has well stated the attitude of modern thought: "Man had to be an animal before he could be a spirit; he had to crawl in the dust before he could, like Newton, dare

¹ Spaulding, The New Rationalism, p. 514. (Italics are mine.)

the flight through the universe. Without the body no activity, and without sense, no perception."

From the cave of primitive man to the mansion is a long road but further and no less certain is the road from nebula to man himself; a fact which no one has been able successfully to deny. It is true there are many steps along the way which science does not understand and hence cannot explain. For instance, no one can speak ex-cathedra saying that living matter has had its origin in non-living and yet the general attitude of evolutionary science resolves itself into this belief. It seems best and necessary to assume "that spontaneous generation occurred in favorable conditions very long ago," 2 making this of all the theories of the origin of life seem to be the most probable.

The general belief of science is that "there has been a more or less complete chain of beings from monad to man." 3 In many species there are found the same principles and functions represented, such as in the wing of the bird, the leg of the horse, the arm of the man, etc. In these is found detailed homonology "not only as regards bones, but as regards muscles, nerves, and blood vessels." 4 "It is one of the most astounding facts of modern science that the first embryonic abodes of moss and fern and pine, of shark and crab and coral polyp, of lizard, leopard, monkey and man are so exactly similar that the highest powers of mind and microscope fail to trace the smallest distinction between them." It seems that into the period from the early cell to the body of the child has been concentrated

² Thomson and Geddes, Evolution, p. 71. ³ Osborn, Origin and Evolution of Life, Preface, p. x. ⁴ Thomson and Geddes, Evolution, p. 43.

and compressed the "progress of the ages," reaching back to the earliest dawn of time. In this short period is seen, though but dimly, the stages of evolutionary progress.

"All animals living, or that ever have lived, are united together by blood relationship of varying nearness or remoteness, and every animal now in existence has a pedigree stretching back, not merely for ten or a hundred generations, but through all geologic time since life first commenced on the earth. The study of development has revealed to us that each animal bears the mark of its ancestry, and is compelled to discover its parentage in its own development; the phases through which an animal passes in its progress from the egg to the adult are no accidental freaks, no mere matters of developmental convenience, but represent more or less closely, in more or less modified manner, the successive stages through which the present condition has been acquired." ⁵

Along the way there are many signs of changed courses and seeming retrogression. There have been many species which in certain eras of time experienced a flourishing existence but have long since become extinct, an outstanding example of which is the trilobite of the Cambrian period. It seems to be a general rule that the greater the tendency of a species to an extreme physical development, far out of proportion to the intellectual, the greater is the tendency for that species to pass off the stage of life. The large volume of recent evidence of the multitudinous vicissitudes of

⁵ Marshall, quoted from Drummond's Ascent of Man, pp. 72-73.

struggling life in the many eras of the past gives pointed meaning to Burroughs' statement that "Nature always hits the mark because she shoots in all directions."

A's the species moves along in its progress, strong tendencies which have served their purposes are allowed to disappear as the species adapts itself to its new relationships. For example, there are seen evidences of new adaptations in certain species of whales which seemingly have no chewing apparatus and yet under the gum are well developed teeth. Nor do they seem to have hind legs and "yet many show vestiges, with bones, cartilages, and even unmoving muscles, which are buried deep below the surface and absolutely useless." 6 Then, too, while most snakes show no signs of legs the boa-constrictor and some others closely akin to it have hind legs though so small that it is hard to detect them. In the light of these facts the story of the serpent at one time being a walking creature and later reduced to crawling can be more than myth.

In the following lines Carruth presents briefly a clear picture of this vast program of development:

"A fire mist and a planet,
A crystal and a cell,
A jellyfish and a Saurian
And caves where the cave men dwell;
Then a sense of law and beauty
And a face turned from the clod;
Some call it evolution
And others call it God."

⁶ Thomson and Geddes, Evolution, p. 48.

Attention is called in passing to the last two lines which represent the fact that there are those who set evolution and God over against each other as though they might be two antithetical factors. Carruth is right, of course, in suggesting this as the attitude of some persons who believe that it is impossible to be an evolutionist and at the same time a consistent believer in divine creation. We maintain, nevertheless, that a satisfactory program can be built only by putting the two together. It is a significant fact that the science departments of educational institutions are teaching generally the lesson of the constant growth of things, call it evolution, the developmental process, call it what we please; and rightly so, because the story of evolution has been read in the manuscripts of rocks, as relics of life have been discovered therein, just as clearly and definitely as ancient writings have been deciphered from slabs of stone. And again, just as definitely are we convinced, and with as good reasons, that an all-Intelligence is responsible for the whole situation, which leads us to the inevitable conclusion that evolution is the divine method of working, and which process is probably best represented by the term creative evolution.

Much of the controversy over evolution would be avoided if those who oppose it would stop to differentiate between evolution and Darwinism, instead of using the two terms as synonyms. Those objecting to evolution really seem to have Darwinism in mind. To be clear, evolution means nothing more than orderly change, in the way of growth and development, and the majority of students who believe in this hypothesis

as the most likely method by which things have come to their present status are unable to accept in full the Darwinian type of evolution because it is too mechanical and fails to rise above the level of chance.

Coming back to our immediate problem, the present status of the different species shows not only the marks of the many stages but the degree of progress made in evolution, which is accentuated if we keep in mind the meager beginning which characterized being, and thus the long journey which life has made. The road leads from nebula to man of to-day and even beyond. For by no means does the present represent the final achievement of the developmental principle; a better world is continually coming into being.

"The Geological book—the greatest historical document of all the ages—gives us as one of its truths the fact that in the known hundred or more million-year record of life, nothing has remained in constant form; that the rule has been not only continuous change but also continuous advance of the highest level. Through vast periods man has himself been subject to changes like those that have been expressed in other living types; and the habit of Nature so set forth seems to indicate that with the earth in continuous state of modification we may expect life and man to keep for the future a rate of growth not less rapid than that of Assured of the validity of these principles, we can be certain that as a race and as individuals we shall be almost continuously under the necessity of meeting adjustment and readjustment to new conditions." To in the light of all these facts it seems

⁷ Merriam, *Science*, Nov. 19, 1920, p. 475.

indeed true that "the process of Becoming is a . . . process of ascension."

The idea that God, the great Spirit, is pulling things on and up toward himself will now engage our attention. It seems certain "there is a power that 'makes for' values, that leads to them, or that produces them . . . that which produces or leads to them must for that very reason, if for no other, itself be a value." 8 It must be not only a value but a supreme, "producing" Value. Strong endorsement of this belief is to be found in Aristotle who would say that final causes must have their subsistence in things that are immovable. There must be a First Mover which is an entity, constituting a first principle upon which depends the Heaven and Nature. The Godhead, "itself unmoved, (it) is the cause of all motion." If there were no God there could be no motion. Those things moved by the Unmoved Mover, God, in turn impart motion to other things.

How does God move the world, according to Aristotle? Hicks would answer this question for Aristotle by saying that the "deity by the attraction which he exerts upon the world is the cause of motion, the ultimate cause of all the ordered regularity and life of Nature." ¹⁰ In interpreting Aristotle, Windelband is even more definite when saying that the Godhead "calls forth all the motion of the world through the desire of all things for it, and through the endeavor

⁸ Spaulding, The New Rationalism, p. 514.

⁹ Metaphysics, 1118, 1012, p. 31. (Quoted from Windelband's History of Ancient Philosophy, p. 267.

¹⁰ Stoic and Epicurean, p. 19.

of all things to actualize the Form that is eternally realized in the Godhead." ¹¹ In Aristotle's own words, rather than in those of his interpreters, we have the most specific confirmation of our philosophical program: "That which first imports motion does so as a thing that is loved." 12 As the object of love and desire God then "is the cause of all motion." "Motion occurs because matter feels the impulse to form itself like God." 13

Much later we find Malebranche advocating this same idea in saying that "there is implanted in every creature a direction toward the Creator. God is not only the unlimited being, he is also the highest good, the final end of all striving." 14 This theory which we are here recommending is especially significant because the great Spirit, drawing all things to himself by means of love and desire, offers a genuine explanation of the moving cause.

Our system maintains that in all things there is an element of intelligence proportionate to the degree of organization experienced by the energy units constituting things. The principle enjoying this intelligent experience is made to be the striving for immortality, the instinct to be, which we have represented as running in the same general stream as the reproductive instinct, the latter being a means by which the impulse to be achieves its ends.

¹¹ Metaphysics, XI, 1072 a, 26. Quoted from Windelband's History of Ancient Philosophy, p. 267.

12 Metaphysics of Aristotle, Book XI, Ch. XII, p. 330. (Trans.

by M'Mahon.)

¹³ Cushman, A Beginner's History of Philosophy, p. 193.
14 Quoted from Falckenberg's History of Modern Philosophy, p. 147.

The desire to perpetuate existence, as seen in all things, is an element of likeness to God himself. As we move up the scale of being, in the vast system of spiritual energy, and see reality organized more and more into active consciousness, we have a situation which more and more approximates likeness to God; and when reaching the organization of human consciousness we have a situation which enjoys experiences identical with God. We are thus led to feel that

"Truth is within ourselves; it takes no rise
From outward things, what'er you may believe
There is an inmost center in us all
When truth abides in fulness; and around,
Wall upon wall, the gross flesh hems it in
This perfect, clear perfection, which is truth
. And to know
Rather consists in opening out a way
Whence the imprisoned splendor may escape
Than in effecting entry for a light
Supposed to be without." 15

James has said that "God in religious experience is not the whole of things but the ideal tendency in things." God, however, is more than a tendency, and the Divine immanence reaches below man. This intelligent, vitalistic principle which we have met, and to which Browning refers, is God in us, a God-element in the world. When we see the bird, the flower, the tree, as well as the baby's smile, we feel sure that a God-principle is there. Of this truth we can be as sure as of any facts which are made certain to us by sense knowledge. The response of this inner intelligence to the

¹⁵ Browning's Paracelsus.

pull of God is what we mean by immanent teleology. Thus it is by the investment of a part of himself in all things, and his very self in man, that the great Spirit takes hold of the world and draws it to himself.

Belief in the indwelling Spirit not only is in harmony with philosophy and unobjectionable to science but has Biblical support as well. In theology, however, it is referred to as the omnipresence of God. Some teach this truth under the caption of the immediacy of God. This fact is clearly in the mind of the Psalmist when he says:

"Whither shall I go from thy Spirit? or whither shall I flee from thy presence? If I ascend up into heaven thou art there; if I make my bed in hell, behold, thou art there. If I take the wings of the morning, and dwell in the uttermost parts of the sea; even there shall thy hand lead me, and thy right hand shall hold me. If I say, Surely the darkness shall cover me, even the night shall be light about me. Yea, the darkness hideth not from thee; but the night shineth as the day; the darkness and the light are both alike to thee." 16

The apostle Paul adds his endorsement to this belief in his address to the Epicurean and Stoic philosophers: "For in him we live, and move, and have our being; as certain also of your poets have said, For we are also his offspring." 17

What other than this could be our attitude when all Nature seems to be instinct with such a marvelous intelligence and beauty? Curtis seems to go a step fur-

¹⁶ Psalm 139: 7-12. ¹⁷ Acts 17: 28.

ther and suggests that what he needs as a substitute for deism is "a universe entirely and constantly dynamic of God, a universe which is nothing other than God in cosmic action." ¹⁸ Curtis would not want to be interpreted literally here. He hardly means to represent more than the reality of a divine immanence. God is not everything and everything is not God, as pantheism would teach. Instead of this we look upon the great Spirit as an all-Intelligence, a Supreme Person, transcending in every respect all other forms of reality. These things being true, it is not strange that in the world of organized spirit all things seem to move toward God.

Man being the "offspring" of God, an impartation from his own self, has had an existence in the great Spirit. Plato believed this to be true, because when we see a thing of real truth or beauty we immediately rec-It is natural to the thought of the mind. Hence such things are in the mind already and must have been known in a former state. This is what Plato means by the preëxistence of the soul, and he is probably right in teaching this belief. It was not an existence identical with that experienced in time because we must allow for growth, but that type of existence simply which makes it possible to say we have come from the great Spirit, and thus instinctively try to get back, just as a child who has been away from home longs to return.

It does seem that

¹⁸ Curtis, The Christian Faith, p. 478.

"Our birth is but a sleep and a forgetting,
The soul that rises in us, our life's star,
Has had elsewhere its setting,
And cometh from afar;
Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God who is our home." 19

It is very natural then that in man there should be the desire not only to be but also the desire to become. It has been said that "to get good is animal, to do good is human, to be good is divine." Man possesses all three characteristics and yet is the only being in which there is a spark of genuine likeness to God. The great Spirit is represented in other things but his very self dwells only in man. Only to the human being belongs human consciousness and this is Godlike. Thus we try to see God in man's experiences, for "God's life is like that of which we catch a transient glimpse when our life is at its best." In other words, we judge God "by what is divinest in ourselves."

Thus it is man of all things who is pulled into closest fellowship with God. It is in those mystic experiences when one's soul flows out into oneness with the great Spirit that the clearest visions of truth come. It was probably to the consummation of this process that John referred when saying, "We shall be like him; for we shall see him as he is." ²⁰ It is true there are very intelligent creatures other than man and they may feel keenly the pull to a higher development, but when it

¹⁹ Wordsworth, Ode on Intimations of Immortality.

²⁰ I John 3:2.

comes to teaching them the deeper facts of life, having to do for instance, with business or faith and into which enter the faculty of reason and genuinely active consciousness, they must be ruled out of the category of beings which can enjoy the higher range of experiences.

It is for this reason that man only is spoken of as being religious. And this tendency is so deeply rooted that religion seems to be an instinct or a composite of instincts. An instinct to what? An instinct to worship. What is worship stripped of all appendages? It is primarily an endeavor to become, to become like the object worshiped; a striving to come into its fullness; a moving toward God. Becoming like God is the highest ambition of the most enthusiastic religionist. All things strive to be; man strives to be and to become. Thus the possibility of being religious, consciously moving toward God, differentiates man from other things. As all things move on and up, man is dissatisfied unless conscious of this experience. This striving to be, then, on the part of all being, to be and to become on the part of the human being, is but the response to the pull of the great Spirit upward. It was no doubt to this drawing power that Jesus had reference when saying, "And I, if I be lifted up from the earth, will draw all men unto me." 21

There is then characteristic of all Nature a great movement of ascending progress, the ultimate objective of which is God. The starting point must be placed in the dim, nebulous stages of the mighty past

²¹ I John 12:32.

and the journey leads, as in the case of man, even to God himself. The mighty strivings in all life, from the least iota of being to the highest developed, are but the struggling desires of spiritual things to answer the call of the great Spirit as God continually operates in his marvelous attractive scheme.

Very often is it necessary to pass by the scientist, the philosopher, the theologian, when seeking the keenest insight into truth as well as its best expression, and appeal to the poet. The fundamental idea running through the facts which we have been endeavoring to set forth in this chapter is well expressed in the "Tennysonian quatrain" which pictures to us

"That God, which ever lives and loves, One God, one law, one element, And one far-off divine event To which the whole creation moves." 22

²² For a similar interpretation, see Smith's Article in Monist, referred to in preceding chapter.

CHAPTER III

DISORGANIZED SPIRITUAL ENERGY

The reader is perhaps thinking that our position, which represents the great Spirit as drawing all things to himself, will be hard to maintain, in the face of the fact that there are many things in the world which are not moving toward God, many things in which there seems to be an absolute absence of good. It cannot be denied that there are many forces operating just as though there were no such God of infinite greatness. These vicious forces have to do not only with the world of humanity but reach into the realm of the lowest forms of being.

The situation naturally asks for some reasonable explanation, and as an over-belief it is here suggested that the vast system of spiritual energy or reality has become disorganized. This disorganization is met in Nature's wastes, cyclones, volcanoes, earthquakes, parasites, diseases in plant and animal life, and when confronted in the highest world of reality, human consciousness, it is called evil. It is the same confusion that is seen in all realms of being but is called by different names and attributed to different causes. There is no objection, however, to calling disorganized forms of spiritual reality evil wherever met (and we have interpreted this as a spiritualistic universe), even outside the pale of human experiences. It seems that Tertullian was reaching after a basal fact when saying

that "evil spirits are the sources of disease and disaster." 1

That there is something wrong in the nature of man and things seems very certain. And if there is a disorganization of spiritual forces, and evil is present in the world there must be a cause. It is an almost universal belief, however, that a complete Intelligence is responsible for the world of being. And if so, it would be inconsistent to attribute to this A'gency an incomplete, imperfect piece of workmanship. This being so, the world must have experienced an inception characterized by perfect and complete experiences. Something then must have happened to disturb the harmony introduced by the great creative Intelligence.

Because we seem to be employing a theological terminology the reader must not feel that the energy concept has been forsaken. We would stress the fact that there is but one reality for all fields of thought. Even though not talking here so much in terms of science and philosophy we are dealing with the same reality—spiritual energy. And in postulating a Creator no blind leap has been made into the dark, for this creative Intelligence is but the great Spirit in which, in Part II, we found all reality culminating.

Again, this program does not necessarily call for a special creation, but rather sees a world emanating from the Creator's own self and undergoing a Spencerian total dissolution, followed by a creative evolu-

¹ Hasting's Encyclopedia of Religion and Ethics, Article on Good and Evil Spirits.

tion, in which latter process the world seems to be at the present time.

The attention of the reader is also carefully called to the fact that there is not represented here the attitude which would say that a completely perfect world's program was interrupted; that the world was further advanced and better at one time than now, for this would not be true. Modern thought is strongly entrenched in the belief that in the process of evolution a better world is coming into existence every day. What we mean to say is that a perfect harmony prevailed at one time whose rhythm was disturbed in some way. 'According to our view, trying to find out what interfered with the harmony characterizing the entire world of being would be identical with seeking a solution of the problem of the origin of evil. In other words, whatever was responsible for evil in human life is that same something which has introduced confusion into the whole realm of organized spiritual being.

In considering what has been responsible for disturbing the regular order of things, it would be interesting to take up some of the theories having to do with the origin of evil. But this would necessitate the risk of getting lost, roaming in the fields of dæmonology and devil-lore. Being interested primarily in the construction of a positive program we shall suggest only one theory for the origin of evil, the most satisfactory yet presented—the theory represented in Genesis of the Bible.

As the Biblical theory is here recommended there are those who will without hesitation declare that we

have forsaken our spirit of scientific research and have wrapped ourselves in the swaddling clothes of primitive belief, adding that our only purpose is to save a dogma. This objection is anticipated not because we feel guilty of the charge which might be made by those who disagree with the theory here presented, but because this is the type of criticism which is commonly made against some of the more conservative religious Such off-hand objection, however, makes no contribution to the general fund of knowledge, because observation has made it very clear that the interest of some in preserving dogma is more than matched by an interest on the part of others in destroying dogma, and without any particular purpose in mind.

It is true, when approaching any problem scientifically, from the standpoint of the empiricist, the only thing to do is to lay aside the old concepts, even the richest, for the time being; but some students are determined to go even further and in the spirit of genuine dogmatism say they will have nothing to do with any fact which will not submit itself to empirical analysis. This is all right as far as it goes but we maintain that when the scientific approach fails, our only alternative is to reach back for the old concepts which as sources of explanation have satisfied the demands of reason, even though we cannot unravel their deepest meaning. This is much better than to assume the worthlessness of concepts because methods break down. Those who adopt this negative policy will have to forego the hope of coming to satisfactory conclusions concerning the deepest of human experiences, because there are many certainties which we must recog-

nize and yet cannot analyze scientifically; many experiences whose cause and content we cannot describe, and yet are very unwilling and unable to disbelieve in them as facts. And so, when an interpretation of particular facts constitutes our immediate objective, we contend that the goal is more significant than the roads by which it might be reached; these ultimate truths must take precedence over the methods which are used in an attempted analysis of these facts. We should hesitate to throw overboard beliefs, even dogmas, which have shown themselves to possess all the qualities of genuine facts, especially when more dependable formulations have not been presented. This is not intended as a plea for the retention of all old concepts. The purpose here is simply to suggest the need of a check on the noticeable tendency to consign beliefs to the scrap-heap before certainty is established that they are to be supplanted by others that are better or even as good.

The seeming impossibility of successfully applying this negative policy in an absolute way is illustrated in Bacon's Novum Organum, which although old is highly respected by science because of the influence it has had upon modern scientific methods of research. In the first part Bacon, as a genuine empiricist, recommends the putting aside of all old notions, which he classifies as Idols of the Tribe, Cave, Market-place, and Theater, and suggests that all accepted facts be established by means of a large number of experiments. And then in the very heart of this scientific work we find him saying, "The beginning is from God; for the business which is in hand, having the character of good

so strongly impressed upon it, appears manifestly to proceed from God, who is the author of good, and the Father of Lights." Bacon was not able to reach such conclusions as these by means of scientific analysis, and yet he unhesitatingly accepts them as genuine facts because, seemingly, there is no other reasonable attitude to be assumed.

Very frequently we meet the attitude which says science shows conclusively that the Biblical account of the origin of evil is wrong, that there never has been such an event as a "fall" in the history of the human race, but instead, man has experienced a gradual upward climb toward a bigger and better life. It does seem true that progress has characterized the known history of the human race, but in the light of these larger claims it is in order here to ask, what science is making possible such definite evidence concerning the evolution of man's moral and spiritual experiences? The physical sciences, by means of the Geological book, are able to study the development of so-called life since its inception way back in the Proterozoic era, but these sciences are not interesting themselves with facts which belong primarily to the realm of human con-The hopeful outlook for this kind of sciousness. knowledge then would be in such branches of study as genetic psychology, sociology, archeology, ethnology, anthropology, especially the last named. Comparatively speaking, however, these sciences can go but a short distance into the past. Concerning man's moral status they give us nothing genuinely definite that antedates facts represented in the written languages of the

² Rand's Modern Classical Philosophers, p. 49.

oldest civilizations, which reach back only to 5000 B. C., making the record of man's thought to be about 7000 years old. On the other hand, the oldest relics of the human species belong to the Pleistocene period, indicating that man has been on the earth about 1,000,000 years.

If science's classification of primitive savages "is based on the degree of intelligence manifested in making implements," and if scientific knowledge has to do with facts primarily of an empirical origin, we are inclined to question the possibility of obtaining any conclusive scientific evidence concerning the moral development of the human species which would cover the entire period of man's existence. That is to say, when students claim there never has been a hitch in the spiritual progress of the human species, the reasons set forth substantiating such claim may cover such a small part of the time man has existed as to make the claim of very uncertain value. Our own personal experience has been that when asking the specialist, the anthropologist for instance, if he has facts which contradict the belief that "something happened" in the early stages of man's moral relationships, to find him, the anthropologist, answering in the negative, adding that his methods and interests are not such as to lead him to this conclusion. Thus, while the Biblical concept may not justify itself empirically in the eyes of many students, it is able nevertheless to defy those very students to set forth empirical evidence that will bring about its undoing.

The principal point intended to be made in the few paragraphs immediately preceding is that no student

should insist upon making his particular standards of approach absolute, thus throwing out all facts which do not happen to fit his methods. Many of the old concepts abide to-day while many attempts at their analyses have long since been forgotten. It makes no difference whether it is or is not true that the Biblical theory of evil is borrowed; we are interested here not in the origin of the story but in the origin of evil itself, which the story sets forth.

In proceeding, we insist that this theory is offered not simply because it has the support of Biblical authority but because for us it best answers the demands both of empirical discoveries and good reason. We are not concerned as to whether this story is given an allegorical interpretation or looked upon as genuinely real. We are interested here only in the fact that it suggests that confusion was introduced into a beautiful life of harmony. The account of what happened is more important in our discussion than the way it happened.

The Biblical account of the origin of evil is very simple. God is the Creator of angels, men, all things (not out of nothing); the creative process probably being the same for all forms of being. The angels were endowed with free will the same as human beings. Some of them through disobedience fell. The first man or group of men came in touch with this confusion with the result that the spirituality of human life became disorganized. God did not create evil but he endowed his creatures with free will in which there was the possibility of going away from him.

In modern thought there is a feeling that the freedom of the will is outgrown, and the idea meets with

very strong opposition from those who see necessity chiefly in an ordered world of Nature. It seems, however, that these two views are reconcilable and that both can claim a large degree of justification for their existence. The misunderstanding is probably due to the fact that the same phenomena have not been kept in mind. It should be remembered that human experiences have a relationship to what might be called several different worlds of beings, in which different laws operate; and it is in this very fact that the problem of free will can find its explanation. When advocating freedom of the will we are talking in terms of psychology, while the representative of causality in asserting his claim is referring to the laws which seem ordinarily to prevail in the realms of physics, chemistry, and biology. It is only to human consciousness, the highest organization of spiritual energy, that free will is ascribed; all lower strata of reality having a tendency to free will only in the measure in which they, in the organization of their very being, approach the likeness of the perfectly organized realm of human consciousness. So it is easily possible to think of man as a freewilled being, living in a world of so-called determinism.

It would be easily possible at this time to drift into a discussion of the possibility of evil spirits or devils developing in the general evolutionary process, thus giving to evil a personal representation, but here such discussion must be ruled out of order.

Let us look more closely at the picture of evil entering the world through Adam as it is given in Genesis somewhat in detail. Adam's experience was similar

no doubt to that of the fallen angels, plus the fact that he caught the contagion from them. In Eden a line of demarcation was set up in the tree of knowledge of good and evil. God seems to have said to the occupants of the Garden: "You can come toward me and please me or you can go away from me, which is equivalent to disobedience," at the same time warning them of the consequences of the misstep. Influenced by disorganized spiritual force or forces already in existence (whether personally represented, though easily possible, does not concern us now) they allowed themselves to make the mistake, turned away from God and thus became guilty of disobedience. The result of this conscious mistake naturally made its imprint on them and according to the laws of heredity has been handed down to all posterity, assuming the form of a negative tendency.

It is then in the fall of the angels and of Adam and Eve in the Garden of Eden that we meet the occasion for the introduction of evil into human life and probably into man's whole world of reality, whoever Adam and Eve were and whatever the Garden of Eden was. We should keep in mind that according to this representation evil existed before the Edenic experience. But let us not make the mistake here of picturing in our minds too exactly the details of this specific situation. The idea that God, like a mechanic with a set of tools set himself to the task of making a world, a Garden of Eden, human beings, etc., must fade away as we come face to face with known facts. It is better to see that an all-Intelligence could and has found his best creative expression in a gigantic program which took a countless number of years of development before man began to play a conscious, leading rôle in the drama of world activities.

We repeat that the significant thing for us in the story of Genesis is that something happened some time in the history of the universe which disorganized the system of spiritual forces, opening the way for possible chaos; also the outstanding fact that the break occurred in the realm of human consciousness. To have become universal, permeating the last iota of being, even the inorganic world itself having inherited its influence, this confusion or friction had to originate in the highest organization of spiritual energy or reality. Beginning at headquarters it could thus reach down, but it could not have begun in a lower strata of being and reached up in such a universal way. Looked at from every angle, this program which makes evil to be a disorganized spiritual energy bears the marks of a completeness and harmony with facts as they seem to be, which are lacking in so many attempts to explain this problem.3

Should we try, it would be impossible to get away from evil as a universal, inherent reality. "Virtue and vice are not revelations—they are instincts planted in the soul." There are many, however, who object to that interpretation of evil which makes it inherent in life. But even those who dissent from this attitude will consent to talk of the two natures, the two selves.

³ The reader should continually keep in mind the fact that we are representing all things as having a spiritual nature, the various types of being differing only in the organization of the units of spiritual energy which constitute their make-up.

Psychology recognizes a fundamental spirit of self-regard while theology talks in terms of native depravity. It is only in some such theory of evil as this that our dualistic ethics can be reconciled to the monotheistic metaphysics which is generally taught, and the truth of which we have no reason whatsoever to disbelieve. By what other interpretation of evil could we explain the fact that universally associated with the conversion experience is a feeling of undoneness, a conviction of sin? This has to be more than a mere coincidence. In the persistence of such experiences, which seemingly reach into the past for their general cause, we have a situation which has justifiably encouraged belief in some kind of a doctrine of inherent evil.

Some peoples meeting evil as a reality, and trying to satisfy themselves with a definite program, in relation to this fact, practiced the custom of taking over the gods of conquered foes, making them their evil gods. Even in the Old Testament we find the Hebrews coming face to face with evil as a fact and seemingly not knowing what else to do, ascribe to Jehovah himself responsibility for it, thus making him the representative and dispenser of both good and bad.⁴

The theory which we are presenting finds support also in the fact that it is impossible, on the part of many thinkers, to believe that evil really has a rightful place in the vast program of spiritual being. Even though evil with its irregularities seems to be a part of the general process of becoming it could hardly have

⁴ Joshua 23: 15; Judges 2: 15; 9: 23; 1 Samuel 16: 14; 1 Samuel 18: 10; 1 Kings 9: 9; Jeremiah 41: 11; Jonah 3: 10; 4: 2, etc.

been created for the purpose of playing such a definite, negative rôle. It is our belief that in the realm of values the negative has been stressed too much. There is too strong a tendency to teach the awfulness of evil rather than a positive program which emphasizes the beauty and worth of good. Native depravity is significant and real but hardly as much so as the fact that it is possible to ascend, to become like God. It is true we find universally hot and cold, weak and strong, sick and well, large and small, good and bad, etc., and yet a system built on the idea of the necessity of all these opposites has not demonstrated its claims, to the satisfaction of many thinkers. That contrasts exist, no one would think of doubting, but we can see no necessary and certain teleology in them which would justify the claim that in order for good to exist it must have its opposite, bad. Self-expression and realization belong in the list of fundamental impulses but it seems that evil's relationship to these processes is only that of ultimate retardation.

There are some students, however, who take the opposite view and claim that evil is performing its function as a positive factor in the world of general experiences. This seems to be a reasonable attitude for him who does not see the Creator as a personal agent nor in the aspects of omniscience and omnipotence. But when we believe the Creator to be an all-intelligent Being, it seemingly is inconsistent, and inconceivable as well, that he should introduce evil into his plan of creation, with its resultant sorrow, tragedy and woe, in order ultimately to bring a kingdom of righteousness into being. God could not be responsible for the

presence of evil and then rightfully expect human beings to heed the wise admonition of abhoring that which is evil and cleaving to that which is good.

By no means was this Jesus' notion of evil. His life constitutes a tremendous denouncement of the negative factors which operate against human welfare. "He nowhere says that sickness is a beneficent infliction, and that evil has a healthy use. No, he calls sickness sickness and health health. All evil, all wretchedness, is for him something dreadful; it is of the great kingdom of Satan. . . . He knows that advance is possible only when weakness is overcome, when sickness is made well." 5 The correct interpretation of Jesus' work is to be seen in the "overcoming and removal of misery, of need, of sickness . . . the casting out of devils," and he points to the last part of this program as the "sense and seal of his mission."

The climactic realization of this retrogressive tendency, evil, is seen in death, the breaking up of inferior systems of spiritual energy. This then makes death to be the natural result of man's conscious interruption of a perfectly organized program. In other words, the universal penalty inflicted by evil is death. And when we see all life fighting for its own preservation and all being naturally revolting against death, we are made to feel that the introduction of evil into the world, bringing conflict in its train, must be looked upon as an event born out of season, having no place in the original program of the Creator.

Facts, therefore, as they seem to be, point to that

⁵ Harnack, in Das Wesen des Christenthums, 1900, p. 39. Quoted from James' Varieties of Religious Experience, p. 100.

system of belief which sees a world of spiritual reality, into the original plan of whose Maker confusion has been introduced, this intrusion rooting its cause into the freedom of choice with which the Creator endowed his creatures. And the resultant disorganization having reached into the whole realm of being, tends to impede the progress of things which, nevertheless, responsive to the higher appeal, move on and up toward God.

CHAPTER IV

POSITIVE VALUES¹

A's has been suggested before, the entire program represented in this volume may be characterized as a search for the real. In the ultimate analysis of things there was met what has been called psychical energy, the highest organization of this final reality being the consciousness of mind. It was then concluded that in the association of the units of energy an attractive element prevails and that ascending progress characterizes the whole order of things, in and above which is an unmoved Mover, God. Having studied the nature of reality and how the units of energy are related to one another, the last step yet remains to be taken. would seem natural that in our search the final problem would be to seek a better understanding of what is involved in the relationships which exist between the highest organizations of reality referred to aboveactive human minds, endowed with the possibility of consciousness. This introduces us into the realm of personality. We have found a close relationship to exist between God and the world and are justified surely in anticipating a particular linkage to exist between him and the very highest types of being, as well as between these persons themselves. It would seem

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¹ This chapter is a reproduction of the Author's article, "Positive Values in Human Experience," appearing in the July-August issue of the *Methodist Review*, by permission of the editor.

to be in this higher realm that we should expect to find the most worth-while facts which can possibly be realized—genuine values. The preceding chapter was given over to a discussion of those negative factors called evil, so our immediate interest now will be a study of positive facts, positive values in human experience. As we proceed it will seem evident that there is a definite relationship between the work of this unmoved Mover, God, and the program represented by the Christ of Revelation. That is, it is in some such outline as has been set forth herein to which the Christian view of God and the world answers and gives endorsement.

In the first part of a discussion of positive values it would seem very fitting that some explanation be made as to what is meant by values. An attempt immediately to clear up this point, while seemingly an incidental matter, is probably more difficult of achievement than the casual observer might think. And although it may be even impossible to give a definition of value which will satisfy the exacting critic, it is in order, in the interest of a mutual understanding, at least to make a statement as to what we are going to mean by the term in this chapter. So with this purpose specifically in mind the position is taken that anything of an abiding character which appeals to us and calls forth a response—that which appeals to us, having content sufficient for the realization of our desires and motives, thus affording a sense of satisfaction and fulfillment—may be looked upon as a value. may be said, however, that there are many things which make tremendous appeals and get whole-hearted responses and yet cannot be looked upon as values. This makes it necessary early in our study to differentiate between values, placing some on the credit and some on the debit side of the ledger, calling one group of values positive and the other negative. Those things which contribute to the enrichment and ennoblement of life, proving to be assets in human experience, are considered positive values. On the other hand, those things which actually cost something and take away from the capital of things worth while, thus becoming liabilities in life, are to be looked upon as negative values.

As a possible method of approach to our task the general field of so-called intrinsic values in life might be presented under the following heads: economic, bodily, recreational, intellectual, æsthetic, moral, and religious. Following this suming-up the question naturally arises as to which of these special fields represent the real and lasting verities—genuinely positive values. As an answer to this possible query, each one should be examined, briefly but with care sufficient to avoid unfairness.

The right of economic values, though practical and popular, to be classed as genuine is generally questioned. Present day experiences corroborate history as to the correctness of this attitude. The story of the rich man, tearing down his barns in order to build larger and better, rings in the ears of all who would make wealth identical with real and lasting possessions. Nor can bodily values such as eating, drinking, etc., be placed in the category of things which really count for the most. While many may see in the satisfac-

tion of bodily desires a goal seemingly worth striving for, it is generally realized in moments of calmer meditation that the body is but a vehicle for a something more significant and far-reaching, being but a temporary structure which eventually "crumbles back to dust." Its pleasures are but for a season, of which Belshazzar's feast is a constant reminder. Likewise to so-called recreational values must be ascribed a similar transiency. Coming to intellectual values, we find that they are too cold and abstract to possess the richness which should characterize genuine goods. When at their best, unaided, they rise but to the level of scholasticism. When examining æsthetic values, it is more difficult to reach a conclusion as to what classification should be given them in relation to ultimate truths. The advocate of pancalism would probably give these values first place in the realm of things ultimately best, stressing the fact that æsthetics does not concern itself at all with the ugly, building only around the beautiful. Since, however, art aims only at pleasure, not to teach the scope of its purpose can justifiably be questioned. If art is only for art's sake, are its ends sufficiently big to represent abiding verities? But while the beautiful of æsthetics may not seem to be identical with ultimate truths, we have here surely a significant avenue of approach to the higher experiences of life. And if æsthetic values cannot be put on a par with the highest, art must at least be looked upon as a vital agency, accessory to an appreciation of the most genuine facts in human experience.

It is when coming to moral and religious values, seemingly, that contact is established with those things

most worth while in life. In our search for real values it would seem necessary to pass by all the fields which have been hastily reviewed, and suggest the belief tentatively that the objects of our search are to be found in the domain of ethics and religion. In fact it might be consistent to say that religion itself represents the realm which contains all genuine virtues. It seems reasonable, however, that since conduct represents so much of life, and since ethics has to do with conduct in so far as it is good or bad, right or wrong, ethics might seem to claim a place beside religion, as far as values are concerned. But religion is just as much concerned with conduct as is ethics. In fact the field of religion seems to be inclusive of all in which ethics is interested. The attitude of those who would make morality and religion identical will hardly stand the test of a careful analysis. There is morality in religion but religion moves on beyond this. Some one has said in substance that in any well-balanced conception of religion three universal elements are to be found:

- I. Recognition of a power beyond our control.
- 2. Feeling of dependence upon this power.
- 3. Entering into relations with this power.

Religion then is active and dynamic. It is a striving to become, an active yearning for relations with that Power which we conceive as "having ultimate control over our interests and destinies." ² It is not limited to the world of human relationships. It is interested in conduct good or bad, right or wrong, but it goes further than this. It is morality plus God, plus belief, plus worship. But in morality there is not necessarily

² Compare Pratt's The Religious Consciousness, p. 2.

any God, neither belief nor worship. Religion, then, which is a natural something, perhaps a composite of instincts, seems to be the big "living-room" of life. These things being true, it would seem reasonable to believe that it is within the realm of religious phenomena that the positive and genuine verities of human experience are to be realized.

To say simply that positive values are to be found within religious experience does not reduce the residence of these truths to a sufficiently definite locus and does not give satisfactory enlightenment as to any of their distinctive characteristics. Seeking this specific information leads us to be interested in knowing with what phase or level of human activity these values are always associated. And with this end in view, taking our lead primarily from Dewey and Tufts, we would call attention briefly to the three levels of conduct characteristic of human relationships: ³

- I. The instinctive level. This represents a primitive situation where people act according to instinctive impulses and needs. Society in general has risen above this level.
- 2. The level of standards and customs. Here people aim primarily to conform to the standards and customs of the group.
- 3. The individual, reflective level. Here beliefs and standards are weighed and criticized, and then accepted or rejected according to the wish of the agent. This is outstandingly the *personal* level, the individual rather than the group being the unit which figures in situations.

³ Compare Dewey and Tufts' Ethics, p. 38, passim.

The instinctive level is animal-like: here acts are performed in a blind way. The second level of customs and standards represents bridled activity, despite the fact that much of conduct fails to rise any higher. It is on the third level, the personal, that the highest type of living is experienced. It is here that life's richest meanings are realized. As one rises to this level from time to time he comes into the realm of eternal verities. It is on this level that one thinks his way through problems as a person, this being the way customs are made better, standards lifted, and new values discovered. We would not be understood as decrying standards, laws, etc., or as saying that no values are to be found in group experiences. No one would be willing to doubt the worth of standards as instruments of progress. But even in groups we can act in a limited way as persons. Surely standards are needed but no one can afford to form the habit of passively accepting all standards without ever demanding that they submit themselves to the pragmatic test. People of all ages have gone back too much to creeds, councils, etc., and not enough to the fountains of truth, conscientiously scrutinizing and criticizing facts. Wisdom dictates that individuals should critically analyze standards, often rise above them and thus pull the standards up higher. It is only in this way that progress is made possible. All the great leaders who have made contributions to the world's good have lived and worked largely on this highest level-Luther, Huss, Calvin, Knox, Wesley, etc., etc. They analyzed and criticized beliefs and customs and rising above them, led large numbers to a higher plane of belief and activity. Many standards thus come to be means to ends, and are not to be looked upon as absolutely fixed.

It is clearly perceived that when the group level methods crowd out those of the personal level, progress is bridled. The general lesson which the church has learned in this respect stands as an example par excellence. For centuries there was the feeling that the bulk of truth had been revealed and that the standards and laws for all ages had been decreed. Thus progress along every line was impeded. The church spoke for science and consequently there was no scientific advance. For instance, several centuries B. C., the belief was current that the celestial bodies moved about a central fire. Aristotle, however, believed differently and in his program put the earth at the center and made the other bodies, including the sun, to revolve about it. This idea was embodied in the Ptolemaic system of astronomy which was adopted by the church. And so the theory of concentric crystalline spheres, one inside the other like the rings of an onion, the earth being at the center, prevailed until the sixteenth century A.D. This view being sponsored by the church the world had to wait for a Copernicus and Galileo for the banishment of the old mistaken geocentric theory. So long as no individuals dared to challenge the teachings of the group there was no progress. A static church with all beliefs absolutely fixed and teaching the "universalia ante rem" doctrine for the most part without any compromise proved to be a dead church. Incidentally, herein lies a lesson for the church to-day. As the organized representative of religion, in the interest of progress, she must be alert to the newest discoveries of scientific truth (not fads). Not that science can satisfactorily analyze the richest values but it can aid in the discovery and understanding of truth and as a result of these comes appreciation. It seems true that as strictly group relationships so often stand for a curtailment of original, dynamic activity, the initiative to progress universally has its origin in individual persons. And so it is to the reflective level of conduct where we act as individual persons that we must look for the largest possibilities in the discovery and appreciation of life's richest meanings. In other words, in the personal factor is recognized the distinctive feature of religious values.

All this accords with the original definition of values which represented them as being those things which appeal to us and make possible the realization of desires and motives, thus affording a sense of satisfaction and fulfillment. At that time it was not the intention to emphasize the idea of satisfaction and fulfillment but rather the personal pronoun us, which means that genuine values are recognized and appreciated by ourselves as persons. While satisfaction figures, it is not nearly so significant as the character of the agent who has to do with the values. If it were just a case of satisfaction any animal might take precedence over persons in the acquisition of values, for "the being whose capacities of enjoyment are low has the greatest chance of having them fully satisfied; and a highly endowed being will always feel that any happiness which he can look for, as the world is constituted, is imperfect—it

is better to be a human being dissatisfied than a pig satisfied; better to be a Socrates dissatisfied than a fool satisfied." 4

If persons are to realize these values, if there is to be religious experience, it is taken for granted that there must be relations between persons and the Supreme Person. Possibly ultimate truths may be said to reside in persons but their luster is lighted up only when brought into relationship with other values. person is but a part of mankind. There is no such thing as a real value apart from friendship, sympathy, love, coöperation, communication. This fact of relations while being stressed in much of modern thought is a neglected fact in the attitude of many students. There is a tendency to look upon certain things as units of reals and overlook the fact that the relations which exist between these things are just as real as the things themselves, perhaps more so, and constitute an absolutely vital factor in the realm of ultimate truths. To use a crude illustration, the clock on the shelf is worthless out of relation to other things. If it were out in the forest where it had no live contacts, it might just as well not exist as far as its worth is concerned. It is only when it is brought into a situation, conscious and personal, that it has any meaning at all. Thus it seems to be only in the realm of personal relationships that genuine values are to be found. It is here that the climb is completed from thinghood to selfhood. Here we meet the highest realization of reality, the world of selves in process of development being the world of real values. The conception of self here is

⁴ J. S. Mill, quoted from Rand's The Classical Moralists, p. 651.

made clearer in suggesting that in a spiritualistic system of philosophy mind can be looked upon as reality becoming conscious of itself, and self a part of mind personified. The foregoing is not contradictory to saying that values are found in the realm of religious experience because persons are the only agents to whom religious propensities can be ascribed.

The idea of the significance of personal relationships is made more acceptable by the fact that it is only in such relationships as these that genuine purpose and freedom are realized—two essential factors in the category of things really valuable, two factors which seem to belong only to persons. It may be said that purpose appears elsewhere, which surely is a fact, but elsewhere, being impersonal it is so general as to lose the edge of its impressiveness. It is only in the personal agent that pointed and specific purpose reveals itself, as well as freedom which is the right of choosing alternatives. These vital appurtenances belong only to those who have risen to the level of moral and religious relationships—persons. Thus it would seem to be only in the personal relationships of religious experience that positive values are to be found.

How are these ultimate truths to be recognized, acquired, appreciated? This question belongs to a field which has provided the battleground for many interesting controversies. Trying to answer will be to suggest a theory of knowledge which as such would have to do with the reality and sources of truth. That is, going on the assumption that when speaking in terms of ultimate truths, real facts, genuine verities, positive values, we are dealing with the same things, ours does

at this time become fundamentally an epistemological problem. And since the attempt has already been made to define the meaning of values, our particular interest now has to do more with the source of truth, trying to see how these values are realized and appreciated.

One school of thought would answer this saying that ultimate facts are obtained by means of reason. Some students of this same school would go even further and say that in rational activity itself the highest good is realized. It seems, however, that while the rationalistic method is very useful and essential in the discovery of truth, it can be a very cold and mechanical process, too much so to become the avenue of approach to a full understanding and appreciation of the genuine verities of life.

Another group of students, those inclined to positive science, will have but little to do with reason and feel that sense experience is the only dependable source of truth. This is really the experimental method and depends mostly upon laboratory findings. While being a very worth-while method, it seems helpless when trying to deal with supreme values, ultimate truths. This method is well able to deal with the quantitative aspects of things, but when treating values we must go deeper than this. We must get on the inside of facts, if possible, and learn something of their qualitative make-up. It would seemingly have to be a materialistic attitude which could be altogether satisfied with the facts obtained by means of the purely empirical method.

So it seems that while both the methods named may

be generally useful in the discovery of facts, they really play but a limited part as far as establishing a relationship with real values is concerned. But while the self is reaching out for values why is it necessary to depend on any such intermediary agencies? Is it not reasonable to believe that as persons we can establish direct contacts with truth? Remembering the belief suggested earlier in this chapter that an appreciation of positive values is impossible apart from personal relationships, why may not values as we possess them have direct relations with outside values as possessed by other persons and the Supreme Person? In other words, it seems that as of old each individual can justifiably believe in the right to say, "Speak Lord, thy servant heareth," and expect truth to flow in. This attitude represents the possibility of the immediate apprehension of values and may be called intuition, mysticism, insight, illumination, or to use a theological term, revelation.

Some students, however, may object to this belief, saying that it smacks of the spirit which takes delight in riding on the wings of feeling, and that it represents a too liberal indulgence in speculation, adding that there is no scientific basis for assuming such an attitude. But has not the experience of the average student made it seem a mistake to assume that all truths must wait upon a satisfactory scientific analysis for their acceptance? Elsewhere in this book we have suggested this to be an unfair and unwise attitude. Leaving this point as an open question which need not be decided here, are we sure that for the method proposed above there is no genuinely scientific justifica-

tion? Hardly so, because in our immediate apprehension of values, our senses, especially the intimate senses, are playing a definite part. It can be truly believed that intuition works on the basis of sense data. This does not mean that all truths which the individual possesses have necessarily come in from the outside, because it may be that there are innate facts which are a part of the individual's very being. It seems reasonable to believe that there is such a capital of resources with which every person begins business. This as over against Locke's belief that there is nothing in the intellect which was not first in the senses, making the mind like a piece of white paper, a rubbed-off tablet upon which impressions have been tabulated through the senses. Our interests at the present time are not so much concerned with this phase of the problem as with the possibility of subjective values having a relationship with outside values through the senses. But by senses we mean more than Locke did, and the average empiricist also, when using the term. Students for a long time talked in terms of the five sensesseeing, hearing, feeling, tasting, smelling, but psychology to-day is pointing to the presence and activity of additional senses such as temperature, equilibrium, pain, kinæsthetic, and organic. The senses are usually divided into two groups, seeing and hearing called the higher or defining senses and all the rest the lower senses. All define more or less and all are also intimate, but seeing positioned at one extreme is the most defining and the organic at the other extreme as the most intimate. It is in the latter group then, the lower, that we look for those senses which work most

intimately, reporting their material immediately to consciousness, and are thus called intimate or immediate senses. For instance, if we go into a warm room the warmth is immediately perceived, because the impressions picked up by the temperature sense receptors are immediately reported to headquarters for evaluation. Consequently it is these intimate senses which mean so much in the immediate apprehension of values, the organic and kinæsthetic figuring most largely in the handling of the "material" which is organized into religious and artistic experience. For years Professor Starbuck has pointed to the significance of the intimate senses as sources of wisdom in art and religion. Our position here is that by means of these intimate senses truth is immediately apprehended, that these are the avenues through which values move, the means by which "energy flows in." This is not altogether different from saying that "our minds and sense organs are genuine functional parts of the real world." 5 Here then we might see a possible scientific basis for the intuitive activities in which people have always just naturally believed.

Keeping in mind our representation that genuine values reside in the religious aspects of personal relationships the question may be raised at this time as to whether the senses, particularly the intimate senses, do figure as conspicuously in religious experience as has been suggested. As an answer to this imagined question we shall now examine some representative religious data as found in songs, prayers, testimonies, literature, and religious practices. Here we shall prob-

⁵ Leighton, The Field of Philosophy, p. 355.

ably see all the senses at work, not simply receiving impressions but seemingly trying for satisfactions, reaching out for value contacts. And in the realizations of these outreachings we have the raw material, the bulk of content which later culminates in complete religious experience. It would be possible to arrange abundant evidence but only a few illustrations will be presented under each head.

- I. Seeing. "I shall see him face to face." "When by his grace I shall look on his face." "Beloved, now are we the sons of God, and it doth not yet appear what we shall be: but we know that when he shall appear, we shall be like him; for we shall see him as he is." Here are met those who are primarily visual-minded. For them supreme satisfaction seems to be in seeing Jesus.
- 2. Hearing. Such expressions as "the voice of God," "the still small voice," "angels' voices," "I can hear my Saviour calling" show a very impressionable sense of hearing.
- 3. Feeling (touch). "The touch of his hand on mine." "For she said within herself, if I do but touch his garment, I shall be made whole." "And they besought him that they might only touch the border of his garment: and as many as touched were made whole." Also, we see the activity of this sense in the general custom of the laying on of hands in ordination ceremonies.
- 4. Taste. "Taste and see that the Lord is good." The tasting of bread and water at love feasts and bread and wine at sacramental services. At the old Roman marriage ceremony (which was religious) the

bride and groom in the presence of the gods of the family divided a cake of meal between them.

- 5. Smell. The general practice of using flowers at religious services, and often the burning of incense. Some religious cults use sweet smelling fires "pouring on ghi, or liquefied butter," which is but an attempt, conscious or unconscious, to satisfy the sense of smell.
- 6. Temperature. "So then because thou art lukewarm, and neither hot nor cold, I will spue thee out of my mouth." During the conversion experience the heart may become "strangely warmed." When attending worship in which there seems to be no spiritual power we call it a cold service, but if there is fervor and a good spirit we say there is warmth and probably call the group a warm-hearted people.
- 7. Pain. The idea that suffering is pleasing to the gods has been a universal belief. Among inferior peoples some horrible practices have been observed, making pain the means to divine blessing. Even among Christian people this belief has been common, especially with those who practice the extreme self-denial or self-sacrifice theory.
- 8. Equilibrium. "Uphold me according unto thy word." "He will not let me fall." It is very common to hear people pray for guidance and strength that they may be kept from falling. They do not want to waver, but are anxious to be steady and solid like the rock, unshaken by the storms of life.
- 9. Kinæsthetic. Here the sense receptors are in the striped muscles, and especially in the tendons and joints. Evidences of this sense at work are seen in certain customs during worship such as clasping the

hands, bending the knees, closing the eyes, and in the old custom of dancing before the Lord. The experience of the man may be quoted here who when happy said, "Brethren, I feel—I feel—I feel—I feel—I feel—I feel—I feel!" ⁶ While feeling is probably fundamental in religious experience, it seems true that it was playing too large a part in this case. And yet we cannot question the fact that this man did "feel," and felt something down in his very "bones." Many people in their richest experiences close their eyes and ears to everything and just want to "feel" the values. In dealing with illustrations like these in which extreme feeling is stressed, it is impossible to draw a definite line of distinction between the organic and kinæsthetic.

10. Organic, especially hunger and thirst. Here the sense receptors are in the smooth muscles of the body, such as the stomach, intestines, heart, lungs, veins, etc. Manifestations of the activity of this sense are very numerous. "Bread of Life," "Drinking at the fountain," "Feasting in Beulahland," "Hunger and thirst after righteousness." "As the hart panteth after the water brooks, so panteth my soul after thee, O God." "Break thou the Bread of life, dear Lord to me, etc." "Bread of heaven, feed me till I want no more." Attention is also called to the practice of associating feasts with religious festivals. On the other hand, the custom with many people of fasting before certain religious periods may show a conscious effort to deny the desires of the organic sense.

It seems clear from the foregoing that all the senses

⁶ Coe, The Spiritual Life, p. 215.

figure in religious experience, the intimate senses, particularly the organic, being the most active and making possible immediate contacts with values. And just the same as a work of art may be considered first class when it appeals to a large number of the senses, so a religious experience is richest when the whole group of senses play a part. But the criticism may be made that religious experiences are transient, one followed by another, and since it has been said that values reside within the religious aspects of human experience, then as far as the individual is concerned values must also be transient and not abiding. As an answer to this anticipated criticism it can be said that it is in a study of the psychology of the function of the image in religious experience that a clew is obtained as to the possible conservation of these positive values. So important is the part played by the image in religious appreciation that it seems the reality of religion would be seriously curtailed without the faculty of imagination; without the function of the image only the religious experience of the present moment, that which is immediately ours, could be enjoyed. We have here the means by which the religious phenomena which we have seen, heard, felt, etc., can be experienced over again. And what holds good for religion in respect to the image will apply to art as well, but as has been said, eternal values seem to transcend mere beauty whose purpose is only to please.

What is meant by image and imagination and what is the specific part which the image seems to play in this program? Gordon says "the image is the visual, auditory, etc., quality of consciousness which accom-

panies the idea or emotional theme which the artist has in mind." The idea or theme then is that for which the image stands. Again, "imagination is the consciousness of objects or qualities which have no present sensory stimulus to excite them in the mind." In our use here of the term image we are following the general rule. It does seem inconsistent, however, to use the term in such a general way. When dealing with the sense of sight, it is all right, but it would seem better to use the term impression, rather than image, when dealing with the other senses. Different types of imagery characterize different individuals, according to which of the senses are most active. Some persons experience visual, auditory, taste, motor, etc., images, this being determined by whether they think in terms of what they have seen, heard, felt, etc. This is the reason why different arts and certain religious phenomena, and different representations of the same things appeal more to different individuals. The image or impression seems to stand as the intermediary agency between the individual and objective values. It is not an end in itself; it is just a means to realization and conservation. It is the means by which one religious value can be related to other situations, each image becoming something of a seed image lending worth to those experiences which follow.

All images have their source within the realm of experience; that is, all our images seem to partake of the facts which we have experienced. The sensory stimulus may not be present to excite the mind into a consciousness of objects or qualities and yet this sensory

stimulus has been experienced some time in the past and its influence stored away for future reference. the case of productive or creative imagination the image is probably the result both of sensation and reflection, the sensation, however, being the occasion for the appearance of the reflection. This is what Locke would call the "outer and inner perception." Although reflection coöperates in the creation of the image the original stimulus comes from the outside. It seems that in creative imagination the mind simply assembles the images from parts which it has seen, heard, etc., at some previous time. There is a demand upon the imagination in every perception. It is here in this fact that we can see the difference between a realistic and an imaginative piece of work, the latter often proving itself to be a stimulating factor. In art the average mind does not like to have a representation try to tell too much; it likes to have its imagination challenged.

We have mentioned all the senses as playing their part in the handling of religious phenomena, but the greater stream of meaningful images comes in through the intimate senses. Here immediate contact is established with values and the image becomes the means by which the raw material of values is accumulated and reused from time to time. As has been said, the image or impression is not an end in itself. Religion would probably be dead, as far as the individual is concerned, if its stimulus stopped here, even with the images of the higher senses. Genuine religious appreciation is hardly possible until the "material" has been lifted to the level of judgment. The experiences must

have a refining agency which harvests up the meanings and values, and this condition is met in the fact that all sense images in religious and artistic appreciation are reported to the higher centers of the central nervous system for complete satisfaction and evaluation. is to say that the impressions of the different senses converge toward one common meeting place and these different reports are organized as one judgment of In other words, for a religious experience to be complete, to reach the peak of value, the impressions must be lifted out of subconsciousness and become a part of consciousness. This means that judgment and acceptance precede complete appreciation. seems to be in some such procedure as this where the factors which figure in religion coöperate harmoniously toward a state of whole-mindedness that the individual comes into the fullest realization of the positive values in human experience. This attitude ties real values to the whole mental life of the person, which is equivalent to saying that the human mind as a whole, the highest organization of final reality, participates in those relationships which make ultimate truths possible.

In conclusion then, when the higher desires and motives of the self are realized in the world of action, a world of relationships between persons and the Supreme Person, positive values are experienced. In terms of science, this may be called the highest good. In terms of Biblical truth, it constitutes the essential qualifications for full citizenship in the kingdom of heaven. This is genuine religious experience and is the philosophy taught and practiced by Jesus in every-

day life, making it seem very true that Christian Revelation itself lends definite encouragement toward belief in the rightness of evaluating facts on the basis of personal needs, fundamental in all of which program is the energetic interpretation of life and the world.

THE END















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